Dairy Situation

Economics, Statistics, and Cooperatives Service

U.S. Department of Agriculture

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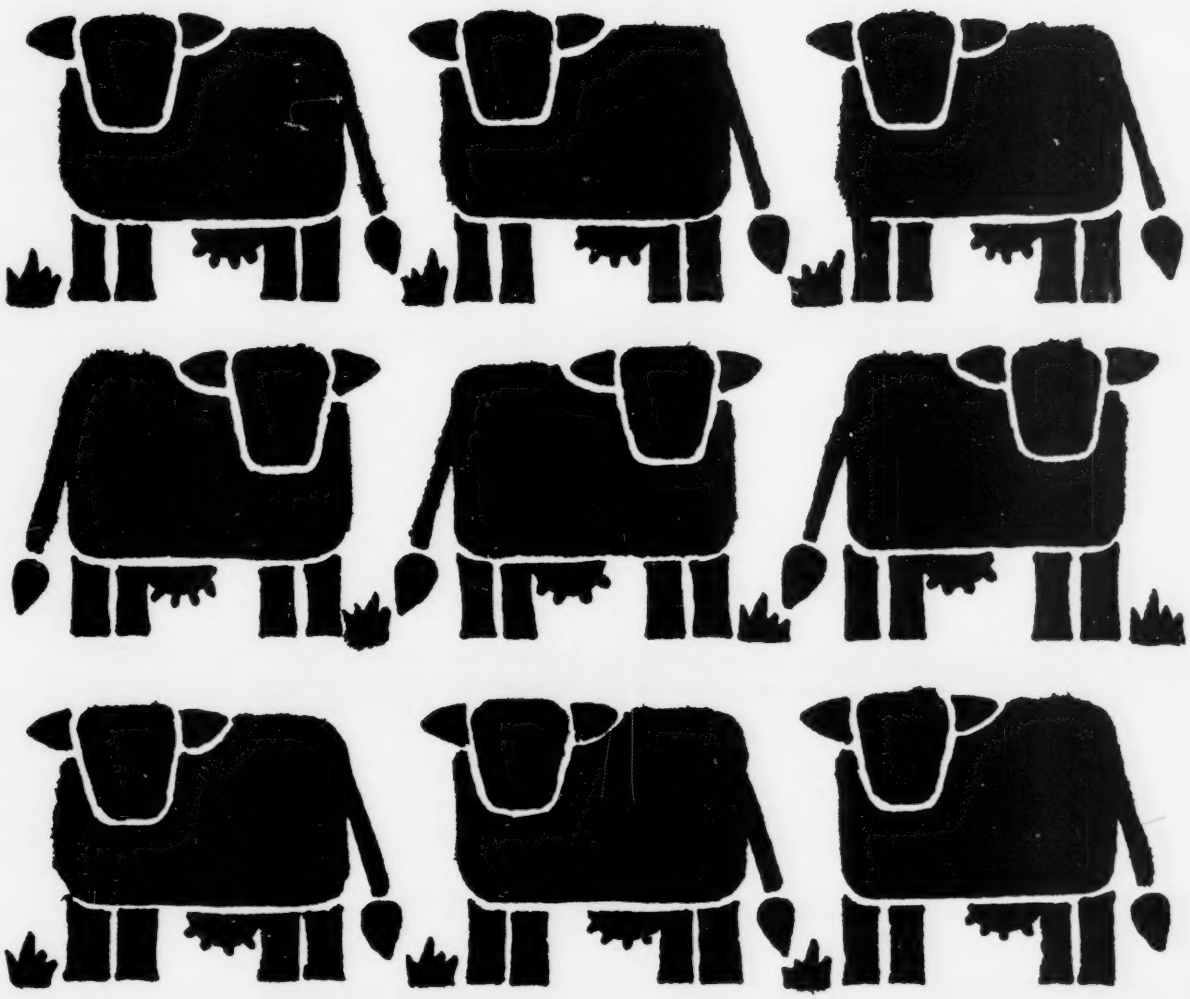
Approved by the World Food and Agricultural Outlook and Situation Board



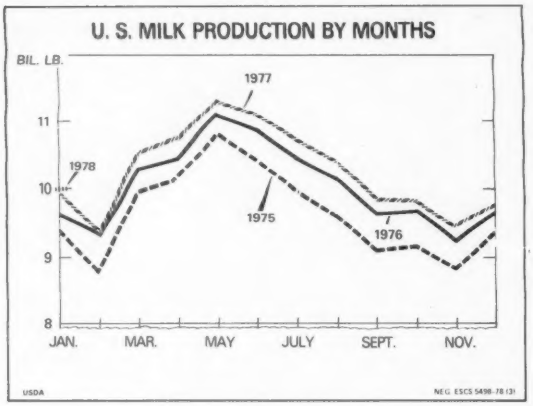


Figure 1

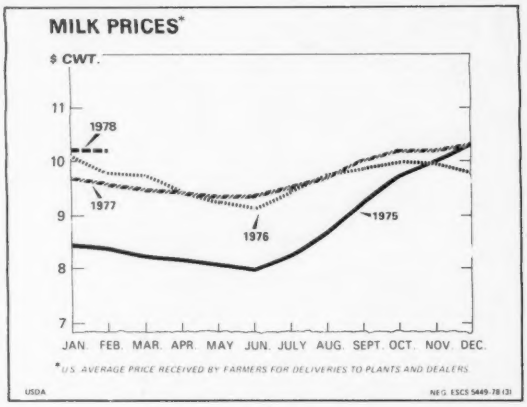
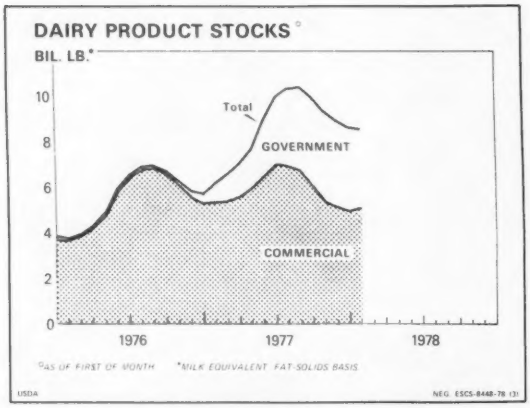


Figure 2



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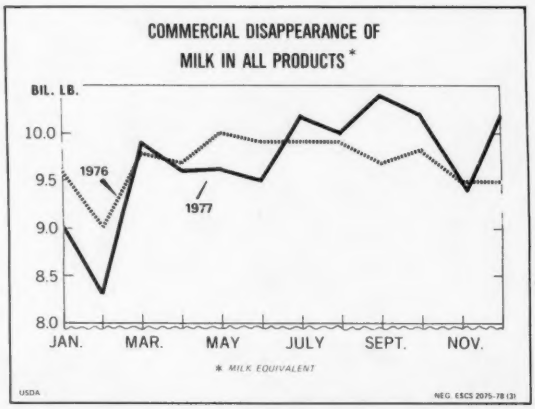


Figure 4

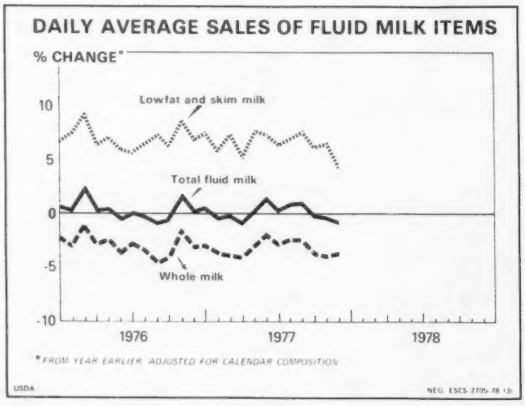
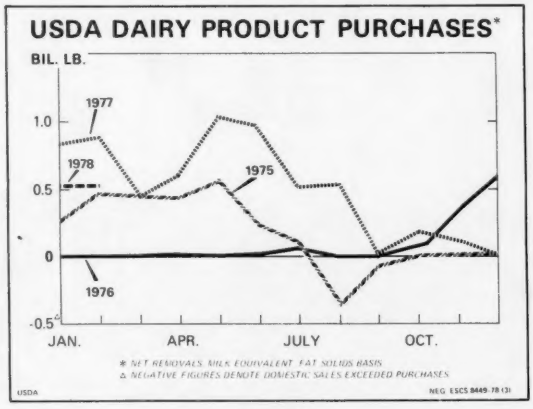


Figure 5



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Principal Contributors:
James J. Miller (202) 447-8915
Charles N. Shaw (202) 447-8915

Economics, Statistics, and Cooperatives Service
U.S. Department of Agriculture
Washington, D.C. 20250

Approved by the World Food and Agricultural Outlook and Situation Board

SUMMARY

Gains in milk output slowed substantially by early 1978. Milk production in December-January was less than 1 percent above a year earlier, following rises of more than 2 percent last summer and early fall. Most of the weakening occurred in the Midwest, perhaps partially due to the fact that a sizable proportion of feed grains fed to dairy cows is homegrown rather than purchased.

Milk-feed price relationships this year probably will be conducive to increased feeding of grain and other concentrates and substantial gains in output per cow. Higher cull cow prices probably will stimulate some heavier culling. Even so, the continued large number of replacement heifers will help to limit the decline in milk cow numbers. Gains during the first half probably will pull total 1978 milk output slightly above 1977. However, there may be a considerable difference among regions.

Commercial use of milk and dairy products could rise about 1 percent this year, mostly due to larger commercial use of cheese. Rising consumer income and higher expected retail meat prices bode

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well for a resumption of growth in commercial use of cheese. Even with this expected growth in total commercial use, USDA purchases under the price support program may reach 1977 levels.

In 1977, total milk output rose more than 2 percent to 123.0 billion pounds, the most produced since 1965. With farm milk prices held up by the higher support price, milk-feed price relationships were favorable through most of 1977 and resulted in large gains in output per cow. Declines in milk cow numbers stayed relatively tiny, partially because of the large number of replacement heifers. Meanwhile, commercial use of milk and dairy products held at the 1976 level. This combination of a large increase in milk production, stagnant commercial use, and large industry stocks at the start of 1977 resulted in USDA purchases under the price support program jumping to the equivalent of 6.1 billion pounds of milk, the largest since 1971 and considerably more than the combined total of the 3 previous years.

Farmers received an average $10.20 per 100 pounds of milk in February, up about 7 percent from a year ago. The increase from a year earlier was primarily the result of the higher support price since wholesale dairy product prices were near support purchase prices in both years. In 1977, farmers' milk prices averaged $9.72, up about a nickel from the strong market prices of 1976.

The April 1 adjustment required by the Food and Agriculture Act of 1977 will raise the support price about 40 to 45 cents. This will keep 1978 farm milk prices above a year earlier. However, there is little chance of manufacturing grade milk prices moving significantly above the support price until at least late summer.

Following a sharp rise in 1976, cash receipts from dairying were up only 3 percent last year to almost $11.8 billion. Larger marketings caused most of the 1977 rise.

Wholesale prices of American cheese have run somewhat above the support purchase prices, as sales were above a year earlier while output and commercial stocks were lower. Meanwhile, butter and nonfat dry milk prices remained near support purchase prices.

Retail prices of milk and dairy products in January were about 4 percent higher than a year earlier, a much smaller increase than for all food. Retail dairy prices probably will continue to rise during the first half of 1978, reflecting both the higher support price for milk and higher marketing costs. For all of 1978, retail dairy prices probably will average 4 to 6 percent above a year ago.

Production of butter in January-February was slightly above the heavy levels of a year ago while American cheese output trailed slightly. In coming months, the amount of milk used in manufacturing probably will be slightly above a year earlier, with cheese absorbing most of the increase.

Per capita consumption in 1977 totaled 552 pounds, milk equivalent, up slightly from 1976. Larger government donations outweighed a small decline in per person commercial use. In 1978, per capita consumption probably will be about the same, as USDA donations will remain substantial and sales are expected to increase at about the same rate as the population.

February 1 commercial stocks of American cheese were well below a year earlier and this reduction will allow much larger amounts of milk than a year earlier to be absorbed in seasonally rebuilding cheese stocks.

Imports of dairy products in 1977 totaled almost 2.0 billion pounds milk equivalent, up just slightly from 1976. While imports of products subject to quota were higher, imports of nonquota cheese were lower.

Intervention stocks of nonfat dry milk in the European Community (EC) were below a year earlier at the end of 1977. Powder output in 1977 was down slightly and use has been stimulated by various programs. Even so, the surplus in the EC was still very heavy as milk production was up almost 3 percent from 1976.

DAIRY SITUATION

SITUATION AND OUTLOOK

PRODUCTION

Gains in Milk Output Ease

Milk output in January was up less than one percent from year-earlier levels, reflecting both a slower rate of gain in output per cow and a sharper rate of decline in cow numbers. The increase in total production was the smallest since production moved above year-earlier levels during the second half of 1975.

Milk output per cow in January was less than 2 percent above a year earlier and about the same as the year-to-year increase in December. These gains were down sharply from the 3-percent increases of last fall and were the slowest since the fall of 1975. Even so, dairy farmers reportedly fed 5 percent more grain and other concentrates than a year earlier on January 1, following a similar boost of almost 6 percent on October 1.

Milk cow numbers in early 1978 were down about 1 percent from year-earlier levels. While this was still a fairly slow rate of decline, it was the sharpest since early 1976.

Changes in total milk production early this year varied widely among regions. Output was up 4 percent in the Northeast and almost 6 percent in the Pacific region, while declining slightly in the important Lake States region and dropping almost 4 percent in the Corn Belt. Fifteen (including most of the Midwest) of the 33 States that report monthly produced less milk than last January. In the 5 leading dairy States, production posted 6 to 7-percent increases in New York and California, slight increases in Pennsylvania and Wisconsin, and a decline of 4 percent in Minnesota.

Outlook for 1978

The boost in milk production in response to last fall's lower feed prices was not as great as earlier reported and output has already eased substantially. The outlook will remain unclear until the combined effects of several factors start to take form.

Farm milk prices throughout 1978 will run higher than last year because of the higher support prices. The semiannual adjustment in the support price required by the Food and Agriculture Act of 1977 will add about 40 to 45 cents per 100 pounds to the current $9.00 support price on April 1, 1978.

Dairy ration costs likely will average lower than a year ago during the first half of the year, but may approach year-earlier levels this summer. The resulting milk-feed price relationships should be fairly stable throughout the year and will be conducive to heavy grain feeding and continued gains in output per cow.

Milk cows and replacements, 1975-78

Date	Milk cows	Replacement heifers, 500 pounds and over	
		Number	Per 100 cows
	1,000		*Number*
1975			
January1	11,220	4,087	36.4
July 1	11,148	3,924	35.2
1976			
January 1	11,087	3,958	35.7
July 1	11,058	3,942	35.6
1977			
January 1	11,035	3,888	35.2
July 1	10,996	4,005	36.4
1978			
January 1	10,930	3,896	35.6

The still large supply of replacement heifers at the start of the year, running over 35 per 100 milk cows, likely will tend to hold up cow numbers. However, higher slaughter cow prices probably will exert considerable downward pressure. Utility cows at Omaha were going for over $30 per 100 pounds by early March, with stronger prices expected this summer and fall.

Regional differences may continue to be pronounced. Production probably will continue to increase strongly in the Pacific and Northeast regions, where lower feed prices directly boost farm returns. In the Midwest, milk output might stabilize or decline slightly.

With milk prices above a year ago and feed prices expected to be somewhat lower than last year, the current outlook is for some further gains in milk production, at least through the first half of the year. For all of 1978, output probably will total slightly above 1977, although the potential exists for either a substantial increase or a slight decline.

Table 1--Milk production, milk per cow, and milk cows on farms, by months, 1970-77, with comparisons

Month	1970	1971	1972	1973	1974	1975	1976	1977 1/	Change from year earlier: 1976	Change from year earlier: 1977
	Milk production 2/									
	Million pounds								Percent	
January	9,405	9,576	9,728	9,532	9,335	9,341	9,600	9,914	+2.8	+3.3
February	8,857	8,996	9,399	8,945	8,763	8,766	9,290	9,337	+6.0	+.5
March	10,103	10,223	10,455	10,184	9,989	9,986	10,281	10,586	+3.0	+3.0
April	10,295	10,425	10,572	10,303	10,124	10,092	10,464	10,743	+3.7	+2.7
May	11,053	11,161	11,280	10,960	10,869	10,778	11,110	11,373	+3.1	+2.4
June	10,708	10,820	10,962	10,542	10,615	10,447	10,806	11,021	+3.4	+2.0
July	10,212	10,288	10,455	10,021	10,171	9,972	10,444	10,693	+4.7	+2.4
August	9,734	9,863	9,989	9,496	9,711	9,538	10,129	10,397	+6.2	+2.6
September	9,203	9,332	9,442	8,885	9,137	9,063	9,607	9,850	+6.0	+2.5
October	9,278	9,446	9,438	8,957	9,100	9,180	9,626	9,844	+4.9	+2.3
November	8,837	9,006	8,925	8,603	8,663	8,830	9,231	9,429	+4.5	+2.1
December	9,321	9,429	9,380	9,063	9,109	9,341	9,681	9,770	+3.6	+.9
Total 3/	117,007	118,566	120,025	115,491	115,586	115,334	120,269	122,957	+4.3	+2.2
	Milk per cow 2/									
	Pounds								Percent	
January	778	804	827	822	828	833	866	898	+4.0	+3.7
February	734	757	800	774	778	782	839	847	+7.3	+1.0
March	838	861	890	884	888	892	929	961	+4.1	+3.4
April	856	879	901	898	901	903	946	976	+4.8	+3.2
May	920	942	963	958	968	966	1,006	1,035	+4.1	+2.9
June	892	914	937	924	946	938	978	1,004	+4.3	+2.7
July	852	870	895	881	907	896	945	975	+5.5	+3.2
August	813	834	856	837	866	858	917	947	+6.9	+3.3
September	770	790	810	785	814	816	870	898	+6.6	+3.2
October	777	801	810	792	812	827	872	899	+5.4	+3.1
November	741	764	767	761	773	797	836	861	+4.9	+3.0
December	782	800	807	802	812	843	877	893	+4.0	+1.8
Total	9,751	10,015	10,259	10,119	10,293	10,350	10,879	11,194	+5.1	+2.9
	Milk cows on farms 4/									
	Thousands								Percent	
January	12,087	11,907	11,769	11,601	11,279	11,208	11,087	11,036	-1.1	-.5
February	12,070	11,888	11,755	11,557	11,261	11,203	11,076	11,025	-1.1	-.5
March	12,053	11,879	11,742	11,518	11,254	11,189	11,062	11,012	-1.1	-.5
April	12,034	11,865	11,734	11,472	11,240	11,178	11,061	11,002	-1.0	-.5
May	12,019	11,850	11,718	11,439	11,225	11,159	11,049	10,991	-1.0	-.5
June	11,999	11,839	11,701	11,407	11,216	11,143	11,049	10,975	-.8	-.7
July	11,986	11,829	11,683	11,375	11,215	11,131	11,052	10,970	-.7	-.7
August	11,969	11,819	11,671	11,348	11,219	11,121	11,049	10,976	-.6	-.7
September	11,956	11,808	11,659	11,322	11,220	11,108	11,039	10,972	-.6	-.6
October	11,945	11,796	11,653	11,314	11,213	11,101	11,045	10,955	-.5	-.8
November	11,932	11,791	11,643	11,308	11,209	11,086	11,044	10,952	-.4	-.8
December	11,916	11,782	11,630	11,304	11,215	11,086	11,035	10,939	-.5	-.9
Annual average	12,000	11,839	11,700	11,413	11,230	11,143	11,055	10,984	-.8	-.6

1/ Preliminary.
2/ Excludes milk sucked by calves.
3/ May not add due to rounding.
4/ Excludes heifers not yet fresh.

Utility cow prices, Omaha

Month	1976	1977	1978
	Dollars per cwt.		
January	23.26	22.95	27.53
February	25.90	23.88	29.45
March	27.45	26.67	
April	30.72	27.63	
May	30.24	26.57	
June	27.47	25.64	
July	25.80	25.23	
August	25.10	25.38	
September	22.90	26.12	
October	22.72	24.89	
November	20.59	23.80	
December	21.60	25.02	
Average	25.31	25.32	

Summary of 1977 Milk Production

Milk production in 1977 totaled 123.0 billion pounds, up more than 2 percent from 1976 and the most since 1965 (table 1). Milk output was up almost 3½ percent (on a daily average basis) during the first quarter of 1977 and exceeded year-earlier levels by around 2½ percent during the second and third quarters of the year. The gains in output slowed further during the fourth quarter and averaged less than 2 percent above year-earlier levels.

Milk production increased in most regions during 1977, with gains of over 3 percent registered in the Pacific, Mountain, and Lake States regions. Production in the Corn Belt increased by 2½ percent, while the important Northeast region yielded a gain of about 1½ percent. The only regions to show a decline for the year were the Southeast, which registered the smallest increase in output per cow, and the Northern Plains, which showed the sharpest rate of decline in cow numbers (tables 2 and 3).

Milk output per cow rose almost 3 percent (315 pounds) to 11,194 pounds last year, following an exceptional 5-percent gain in 1976. The strong 1977 gain primarily reflected the favorable milk-feed price relationships, which continued to encourage heavier concentrate feeding.

Last year, the U.S. milking herd averaged 11.0 million cows, down less than 1 percent from 1976. This was the third consecutive year that the size of the milking herd had declined by the relatively very slow rate of less than 1 percent.

Dairy Heifer Inventory Same as Last Year

The dairy replacement herd on January 1, 1978 was virtually unchanged from the large number of a year ago. Heifers (500 pounds and over) kept for milk cow replacement totaled just under 3.9 million head—up 8,000 from last year but down about 1½ percent from 2 years ago. The ratio of replacement heifers to milk cows was over 35 per 100 cows. This large number of replacements probably will continue to help hold up milk cow numbers in the coming year (figure 7).

The annual livestock inventory showed 10.9 million milk cows on U.S. farms on January 1, 1978, down about 1 percent from a year earlier (table 4). This decline compared with about a half percent decline at the start of 1977 and was slightly greater than at the beginning of 1976. However, the average year-to-year drop during 1966-76 was almost 3 percent.

Cow numbers at the start of this year were up in only 6 States. However, 3 of the 5 major dairy States—California, New York, and Wisconsin—showed an increase.

After dropping slowly during the first 5 months of the year, the rate of decline in milk cows picked up slightly during the remainder of the year. The

Table 2—Milk cow numbers, milk per cow, and changes by production regions, 1977

Production regions	Milk cow numbers[1]	Milk per cow	1977 change from year earlier		
			Milk cow numbers[1]	Milk per cow	Milk production
	1,000 hd.	*Pounds*		*Percent*	
Northeast	2,203	11,191	-.5	+2.1	+1.6
Lake States	3,071	11,490	-.6	+4.0	+3.3
Corn Belt	1,526	10,810	-1.0	+3.5	+2.5
Northern Plains	551	9,829	-2.7	+1.4	-1.3
Appalachian	848	9,907	-.2	+1.4	+1.1
Southeast	468	9,532	-1.3	+.3	-1.0
Delta States	333	8,072	-2.1	+3.2	+1.1
Southern Plains	431	10,406	-1.4	+3.1	+1.7
Mountain	443	12,052	-.6	+3.7	+3.1
Pacific	1,096	14,203	+1.2	+2.3	+3.5
United States[2]	10,984	11,194	-.6	+2.9	+2.2

[1] Average number during the year. [2] Includes Alaska and Hawaii.

Table 3--Milk: Production by production regions, 1973-1977, with comparisons

State and region	1973	1974	1975	1976	1977 1/	1977	
						As percent of U.S. total	Change from year earlier
	Mil. lb.					Percent	
Maine	614	611	629	628	638	0.5	+1.6
New Hampshire	337	329	336	335	339	.3	+1.2
Vermont	1,948	1,945	2,009	2,093	2,109	1.7	+.8
Massachusetts	595	593	601	598	600	.5	+.3
Rhode Island	64	63	63	60	57	2/	-5.0
Connecticut	614	613	608	616	624	.5	+1.3
New York	9,728	9,822	9,964	10,198	10,228	8.3	+.3
New Jersey	575	551	528	545	550	.4	+.9
Pennsylvania	6,718	6,980	7,140	7,507	7,791	6.3	+3.8
Delaware	128	128	127	135	137	.1	+1.5
Maryland	1,464	1,505	1,510	1,549	1,580	1.3	+2.0
NORTHEAST	22,785	23,140	23,515	24,264	24,653	20.1	+1.6
Michigan	4,636	4,350	4,411	4,620	4,761	3.9	+3.1
Wisconsin	18,442	18,713	18,900	20,296	21,041	17.1	+3.7
Minnesota	9,271	9,382	8,946	9,239	9,483	7.7	+2.6
LAKE STATES	32,349	32,445	32,257	34,155	35,285	28.7	+3.3
Ohio	4,267	4,221	4,259	4,503	4,548	3.7	+1.0
Indiana	2,329	2,260	2,210	2,240	2,270	1.8	+1.3
Illinois	2,673	2,522	2,440	2,483	2,480	2.0	-.1
Iowa	4,180	4,025	3,893	3,954	4,240	3.4	+7.2
Missouri	2,992	2,989	2,840	2,919	2,958	2.4	+1.3
CORN BELT	16,441	16,017	15,642	16,099	16,496	13.4	+2.5
North Dakota	1,044	980	917	948	941	.8	-.7
South Dakota	1,642	1,642	1,556	1,668	1,670	1.4	+.1
Nebraska	1,542	1,477	1,431	1,409	1,344	1.1	-4.6
Kansas	1,505	1,403	1,403	1,463	1,461	1.2	-.1
NORTHERN PLAINS	5,733	5,502	5,307	5,488	5,416	4.4	-1.3
Virginia	1,690	1,705	1,756	1,884	1,920	1.6	+1.9
West Virginia	333	350	350	356	333	.3	-6.5
North Carolina	1,490	1,462	1,490	1,590	1,661	1.4	+4.5
Kentucky	2,330	2,370	2,319	2,383	2,466	2.0	+3.5
Tennessee	2,057	1,971	2,031	2,096	2,021	1.6	-3.6
APPALACHIAN	7,900	7,858	7,946	8,309	8,401	6.8	+1.1
South Carolina	497	515	512	521	531	.4	+1.9
Georgia	1,168	1,190	1,199	1,279	1,283	1.0	+.3
Florida	1,843	1,875	1,956	2,023	1,963	1.6	-3.0
Alabama	785	708	686	682	684	.6	+.3
SOUTHEAST	4,293	4,288	4,353	4,505	4,461	3.6	-1.0
Mississippi	950	907	876	862	858	.7	-.5
Arkansas	706	706	707	710	740	.6	+4.2
Louisiana	1,062	1,059	1,054	1,088	1,090	.9	+.2
DELTA STATES	2,718	2,672	2,637	2,660	2,688	2.2	+1.1
Oklahoma	1,140	1,137	1,060	1,102	1,120	.9	+1.6
Texas	3,280	3,380	3,208	3,309	3,365	2.7	+1.7
SOUTHERN PLAINS	4,420	4,517	4,268	4,411	4,485	3.6	+1.7
Montana	312	294	278	275	295	.2	+7.3
Idaho	1,657	1,555	1,555	1,554	1,600	1.3	+3.0
Wyoming	130	123	110	113	122	.1	+8.0
Colorado	854	866	845	835	847	.7	+1.4
New Mexico	318	338	366	405	426	.3	+5.2
Arizona	737	810	840	882	914	.7	+3.6
Utah	866	925	919	924	936	.8	+1.3
Nevada	144	167	168	191	198	.2	+3.7
MOUNTAIN	5,018	5,078	5,081	5,179	5,338	4.3	+3.1
Washington	2,338	2,312	2,322	2,428	2,555	2.1	+5.2
Oregon	1,008	1,004	990	1,024	1,052	.9	+2.7
California	10,332	10,596	10,853	11,583	11,960	9.7	+3.3
PACIFIC	13,678	13,912	14,165	15,035	15,567	12.7	+3.5
Alaska	18	18	17	16	17	2/	+6.2
Hawaii	138	139	146	148	150	.1	+1.4
UNITED STATES	115,491	115,586	115,334	120,269	122,957	100.0	+2.2

1/ Preliminary. 2/ Less than 0.05 percent.

Table 4--Milk production and factors affecting supply, United States, selected years, 1955-78

Year	Milk cattle on farms, January 1 1/			Milk cows on farms, average during year	Milk production		Average prices received by farmers per 100 pounds		
	Milk cows and heifers that have calved	Milk cow replacements; heifers 500 pounds and over			Per cow	Total	All milk, wholesale	Milk, eligible for fluid market	Milk, manufacturing grade
		Total	Per 100 cows						
	Thou.	Thou.	No.	Thou.	Lb.	Mil. lb.	Dol.	Dol.	Dol.
1955	21,320	6,832	32.0	21,044	5,842	122,945	4.01	4.50	3.15
1960	17,650	5,686	32.2	17,515	7,029	123,109	4.21	4.69	3.25
1965	15,380	4,780	31.1	14,953	8,305	124,180	4.23	4.63	3.34
1966	14,490	4,450	30.7	14,071	8,522	119,912	4.81	5.17	3.97
1967	13,725	4,215	30.7	13,415	8,851	118,732	5.02	5.43	4.06
1968	13,115	4,080	31.1	12,832	9,135	117,225	5.24	5.67	4.22
1969	12,550	3,990	31.8	12,307	9,434	116,108	5.49	5.87	4.45
1970	12,091	3,880	32.1	12,000	9,751	117,007	5.71	6.05	4.70
1971	11,909	3,843	32.3	11,839	10,015	118,566	5.87	6.19	4.86
1972	11,776	3,828	32.5	11,700	10,259	120,025	6.07	6.38	5.08
1973	11,622	3,872	33.3	11,413	10,119	115,491	7.14	7.42	6.20
1974	11,297	3,941	34.9	11,230	10,293	115,586	8.33	8.66	7.13
1975	11,220	4,087	36.4	11,143	10,350	115,334	8.75	9.02	7.63
1976	11,087	3,958	35.7	11,055	10,879	120,269	9.66	9.93	8.56
1977 2/	11,035	3,888	35.2	10,984	11,194	122,957	9.72	9.96	8.70
1978 2/	10,930	3,896	35.6						

Year	Dairy ration cost		Milk cow cost		Grain and other concentrates fed to milk cows 3/			Dairy pasture feed condition, as percent of normal	Alfalfa hay prices	
	Value per 100 pounds	Milk-feed price ratio	Price received per head	Milk required to buy a cow	Total fed	Per cow	Per 100 pounds of milk produced		Received by farmers per ton	Paid by farmers per ton
	Dol.	Lb.	Dol.	Cwt.	Thou. tons	Lb.	Lb.	Pct.	Dol.	Dol.
1955	3.16	1.28	146	36	18,664	1,758	30.1	77	22.00	33.70
1960	2.92	1.45	223	53	19,821	2,259	32.2	82	21.00	31.60
1961	2.92	1.45	224	53	20,916	2,404	33.2	84	21.00	30.90
1962	2.95	1.40	221	54	21,617	2,533	34.3	80	21.40	30.60
1963	3.04	1.36	215	52	21,858	2,646	35.1	73	23.50	32.90
1964	3.03	1.38	209	50	22,464	2,800	35.9	73	24.00	32.60
1965	3.03	1.40	212	50	22,827	2,953	36.7	80	24.00	33.00
1966	3.15	1.53	246	51	22,569	3,000	37.6	78	24.70	33.40
1967	3.23	1.56	260	52	22,790	3,374	38.3	80	23.60	34.08
1968	3.10	1.70	274	52	22,886	3,519	39.1	83	23.00	32.94
1969	3.15	1.75	300	55	23,615	3,726	40.7	82	23.90	34.08
1970	3.28	1.74	332	58	24,870	3,979	42.4	81	24.70	34.69
1971	3.44	1.71	358	61	25,107	4,070	42.4	79	27.10	37.57
1972	3.52	1.73	397	65	25,162	4,298	41.9	80	31.45	40.15
1973	4.88	1.46	496	69	25,042	4,389	43.4	83	41.55	51.65
1974	6.23	1.34	500	60	24,586	4,384	42.6	75	52.58	63.58
1975	6.25	1.40	412	47	24,274	4,357	42.1	79	54.38	66.18
1976	6.30	1.53	477	49	25,083	4,545	41.7	70	60.81	72.16
1977 2/	6.10	1.60	503	52	---	---	---	72	60.57	74.25

1/ Prior to 1965, estimated by Livestock Section, ERS.
2/ Preliminary.
3/ On farms where milk or cream was sold. Beginning 1966, data are for all farms where milk was produced.

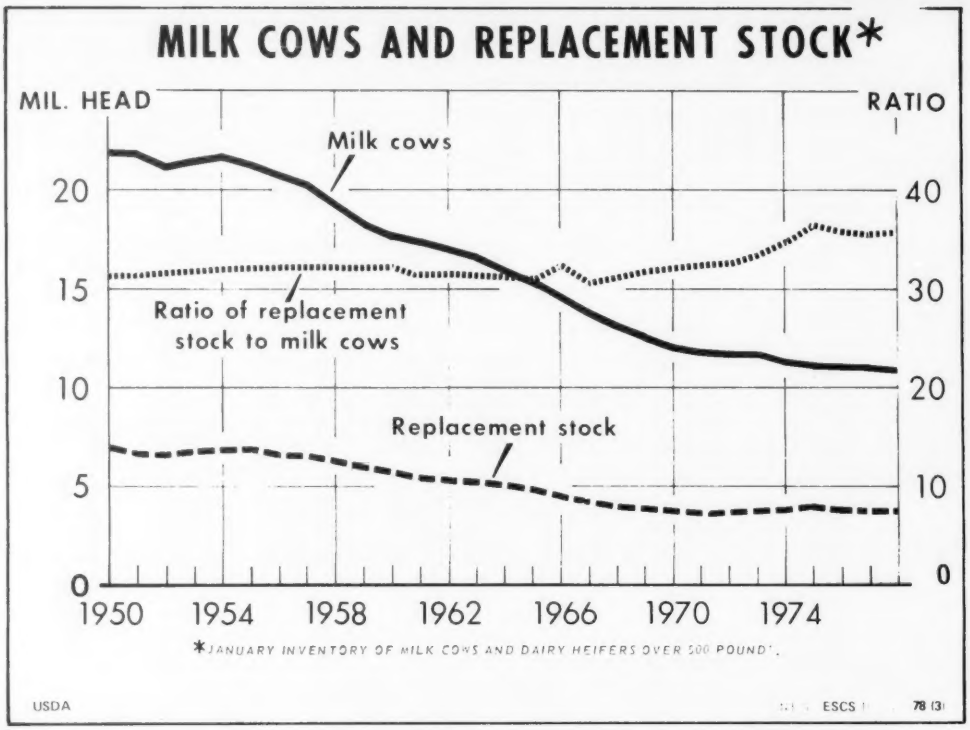

Figure 7

decline of 52,000 cows from May to December compared with a drop of only 14,000 during the comparable period in 1976. During the last half of 1977, cull cow prices averaged above a year earlier. During 1976, the average number of cows increased by just over 1 percent in the Pacific region, while declining in all other regions.

Feed Prices To Rise Seasonally

Both higher protein feed prices and higher corn prices have led to some increase in dairy ration costs in recent months. In early March, soybean meal at Decatur was running about $150 per ton, well below a year ago but $15 to $20 above October. Soybean meal prices probably will remain near current levels throughout the first half of the year, before slipping slightly later in the year if the expected large soybean crop materializes. By early March, Chicago corn was quoted at around $2.20 per bushel, down about 30 cents from a year ago but up 30 to 40 cents from October. Some further strengthening is likely this spring and summer.

The price of 16-percent dairy ration averaged $134 per ton in February, about $17 lower than a year earlier but $9 higher than in October. Stocks of hay on farms on January 1, 1978 were about 18 percent above a year earlier and the highest January 1 stocks since 1974. Farmers paid an average $69 per ton in February for alfalfa hay, down about $11 from the very high levels of a year ago.

The milk-feed price ratio (pounds of feed equal in value to a pound of milk) was 1.7 in February,

Milk-feed price ratio[1]

Month	1976	1977	1978
	Pounds		
January	1.65	1.52	1.69
February	1.58	1.48	1.70
March	1.58	1.47	
April	1.53	1.46	
May	1.49	1.43	
June	1.43	1.49	
July	1.44	1.57	
August	1.50	1.69	
September	1.51	1.80	
October	1.56	1.84	
November	1.60	1.75	
December	1.55	1.71	
Average	1.53	1.60	

[1] Pounds of concentrate ration equal in value to 1 pound of milk.

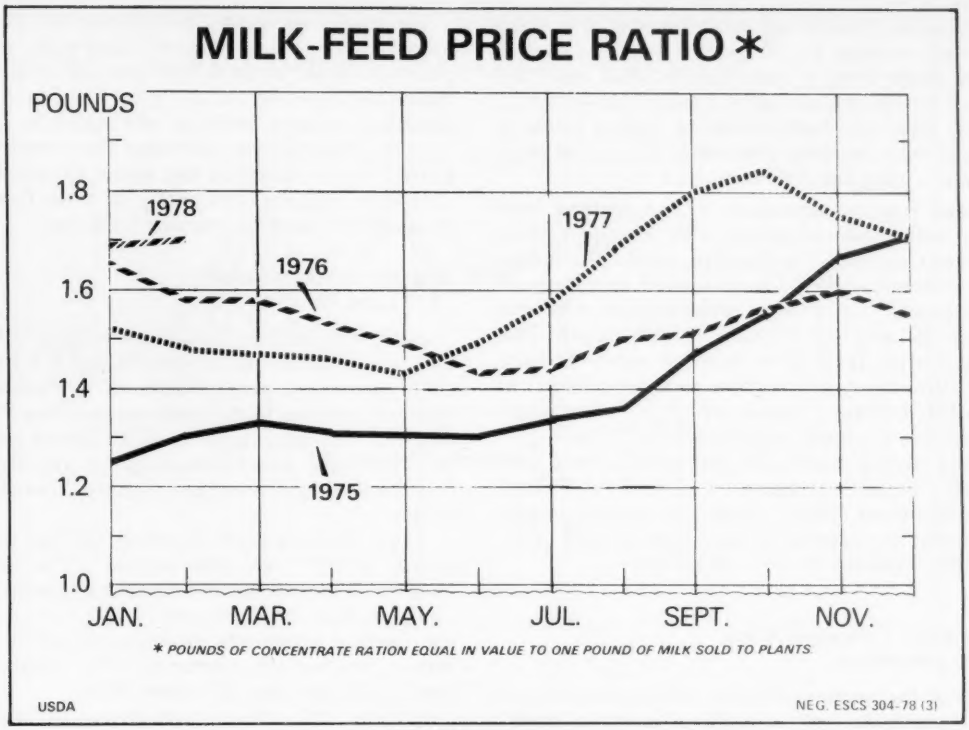

Figure 8

down from 1.8 in September-October but above last February's 1.5 (figure 8). The difference between the price of 100 pounds of milk and 100 pounds of concentrate ration was $4.19, up from $3.10 a year ago. Milk-feed price relationships during the first half of 1978 likely will remain more favorable than a year earlier and should encourage a high level of concentrate feeding.

PRICES AND INCOME

Milk Prices Well Above Last Year

Farmers received an average $10.20 per 100 pounds of milk in February, up about 7 percent from a year ago. The increase from a year earlier was primarily the result of the higher support price since wholesale dairy product prices were near support purchase prices in both years.

Manufacturing grade milk prices averaged $9.14 per 100 pounds in February, up 73 cents from a year earlier. Adjusted to annual average fat test, the price farmers received for this milk was about 8 cents above the support price. Manufacturing grade milk prices have remained close to the support price after rising in early fall.

In 1977, farmers' milk prices averaged $9.72, up about a nickel from 1976. After running below 1976 during the first quarter, the increase in the support price on April 1 resulted in farm milk prices averaging well above the strong market prices of 1976 during the rest of 1977. Manufacturing grade milk prices were up about 15 cents from 1976, mostly due to sharp increases during the last quarter.

Milk prices received by farmers

Month	All sold to plants			Manufacturing grade		
	1976	1977	1978	1976	1977	1978
	Dollars per 100 pounds					
January	10.10	9.65	10.20	9.04	8.68	9.12
February	9.76	9.54	10.20	8.42	8.41	9.14
March	9.75	9.43		8.49	8.46	
April	9.40	9.43		8.45	8.66	
May	9.25	9.34		8.33	8.60	
June	9.14	9.38		8.32	8.55	
July	9.43	9.50		8.62	8.58	
August	9.70	9.69		8.89	8.64	
September	9.84	10.00		8.65	8.83	
October	9.96	10.20		8.54	8.99	
November	9.89	10.20		8.54	9.10	
December	9.72	10.30		8.53	9.16	
Average	9.66	9.72		8.56	8.70	

Minimum Class I prices in Federal order markets will average $11.10 per 100 pounds in April, up 84 cents from a year ago but still below the record of November 1976. The Minnesota-Wisconsin price (the basic mover of Class I prices in Federal order markets) rose about 30 cents between late last spring and February.

Class I prices negotiated by cooperatives have fairly well moved in unison with minimum prices in recent months. During the period November 1977-February 1978, the estimated average over-order payment in Federal order markets has been around 26 cents per 100 pounds each month. This is the lowest level of over-order payments since early 1976. Many cooperatives recently raised their negotiated Class I prices (which include charges for services rendered) approximately 15 cents during the first 2 months of this year to keep pace with the 2-month increase of 13 cents in Federal order minimum Class I prices. In general, cooperatives can be expected to raise their Class I prices to match increases in order minimums.

Adjustment To Support Price To Lift Milk Prices

Under the provisions of the 1977 legislation, the support price for milk must be adjusted on April 1 to reflect estimated changes since October 1 in the index of prices paid by farmers. This adjustment will mean that the support price of $9.00 per 100 pounds must be raised about 40 to 45 cents. Since changes in the adjusted base price and the base period ratio of manufacturing grade milk prices to the average price of all milk are not to be reflected in the adjustment, the support price probably will be about 81 percent of the April 1 parity equivalent price. If the support price on October 1 is set at the legal minimum of 80 percent of parity, the support price may be the same or slightly higher than the April 1 support price.

The higher support price will keep farm milk prices this spring and summer above a year ago. In addition, manufacturing grade milk prices during this flush season likely will average closer to the support price than last year, even if government purchases are as large. Much of the failure to achieve the support price a year ago related to problems in clearing sufficient amounts of barrel cheese to the government. This year, the cheese industry is in a better position to produce barrel cheese to USDA modified specifications and the industry is more familiar with these specifications and USDA purchasing procedures. In addition, the lower commercial stocks of American cheese will allow more cheese to be absorbed in seasonal rebuilding of industry stocks without price-depressing effects.

On the other hand, the chances of farm milk prices running significantly above the support price are small, at least until next fall. USDA purchases are expected to be quite heavy and manufacturing capacity probably will again be strained in some areas. Even a stronger-than-anticipated growth in commercial use would be unlikely to reduce the surplus sufficiently to raise farm milk prices much above the support level.

Larger Marketings Raised 1977 Cash Receipts

Cash receipts from farm marketings of milk and cream are estimated at almost $11.8 billion for 1977, up about 3 percent from 1976. This was the smallest increase from a year earlier since 1965 but followed a 15-percent rise in 1976. Almost all of the 1977 increase was due to larger marketings, as farm milk prices were just slightly above a year earlier.

Cash receipts from dairying during the first quarter of 1977 were close to year-earlier levels as lower milk prices about offset larger marketings. Cash receipts showed small gains during spring and summer when milk prices moved above a year earlier. By the last quarter of 1977, gross income from milk sales was well above 1976.

In early 1978, the income picture for dairymen was better than a year ago. Cash receipts in January-February probably were up about 6 percent from 1977, while the index of prices paid for production items was up less than 4 percent. Cash receipts from dairying likely will post sizable gains during the first half of 1978, but increases from a year earlier probably will diminish later in the year as the year-to-year increases in milk prices shrink.

Wholesale Prices To Hold Near Support Purchase Prices

With large surpluses expected this spring, wholesale dairy product prices probably will stay close to support purchase prices. Even if the surplus turns out to be smaller than anticipated, it likely would be late summer before significant rises in wholesale prices would occur. However, wholesale prices this spring will be somewhat above winter levels, due to the April 1 adjustment in the price support for milk.

With lower commercial stocks and less production than a year ago, American cheese prices have run somewhat above the support purchase prices (figure 9). In late February, 40-pound blocks of American cheese were selling for about $1.01 per pound, while barrel cheese was quoted at about 97 cents. This relatively typical differential between barrel and block cheese prices was in sharp contrast to the very wide differential in early 1977.

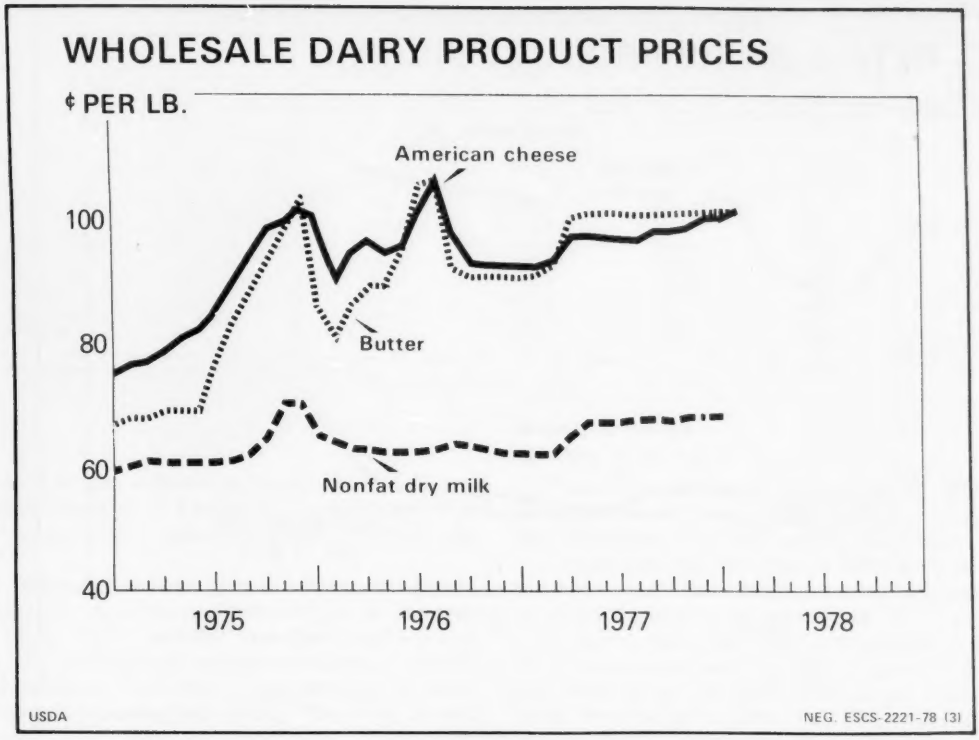

Figure 9

Butter and nonfat dry milk prices were close to the current support purchase prices in late February. In the next few weeks, these prices may rise somewhat in anticipation of the higher support purchase prices, but advances beyond that point are unlikely.

With the seasonal increases in whey product output, edible dry whey prices have slipped. However, the 16 cents per pound (Central States production area) quote in late February was almost double a year earlier. Expected larger output this spring probably will reduce dry whey prices considerably. Lactose prices have remained strong and averaged about 26 cents per pound (Eastern area) in late February.

Wholesale ice cream prices in January were up about 7 percent from a year ago, reflecting higher prices for both sugar and dairy ingredients. Evaporated milk prices at wholesale were also well above a year earlier.

The wholesale dairy price index, as reported by the Bureau of Labor Statistics (BLS), stood at 178.0 in January, up just slightly from last summer but almost 7 percent above January 1977. This index will rise a little in coming months before again stabilizing in late spring and summer.

Retail Price Rises Modest

Retail prices of milk and dairy products in January were less than 4 percent higher than a year earlier, a much smaller increase than the rise in all-food prices. At a January reading of 177.5 (1967=100 on a revised basis), the BLS retail dairy price index was up only 6 percent from 1976.

Increases from a year ago of 6 to 10 percent in retail prices of manufactured dairy products were primarily responsible for the rise in the overall

Retail dairy product prices

Item	Unit	Year 1976	Jan. 1977	Year 1977	Jan. 1978
All dairy products	1967=100	169.3	171.3	173.9	177.5
Butter	c/lb.	126.1	126.8	133.1	138.9
Processed American cheese	c/½-lb.	86.5	84.8	86.0	91.6
Ice cream	c/½-gal.	127.1	131.7	135.2	139.6
Whole milk: At stores	c/½-gal.	82.7	83.5	83.9	84.5
Evaporated milk	c/can	34.3	35.1	36.3	37.5
Skim milk: At stores	c/qt.	44.9	45.4	45.9	46.2

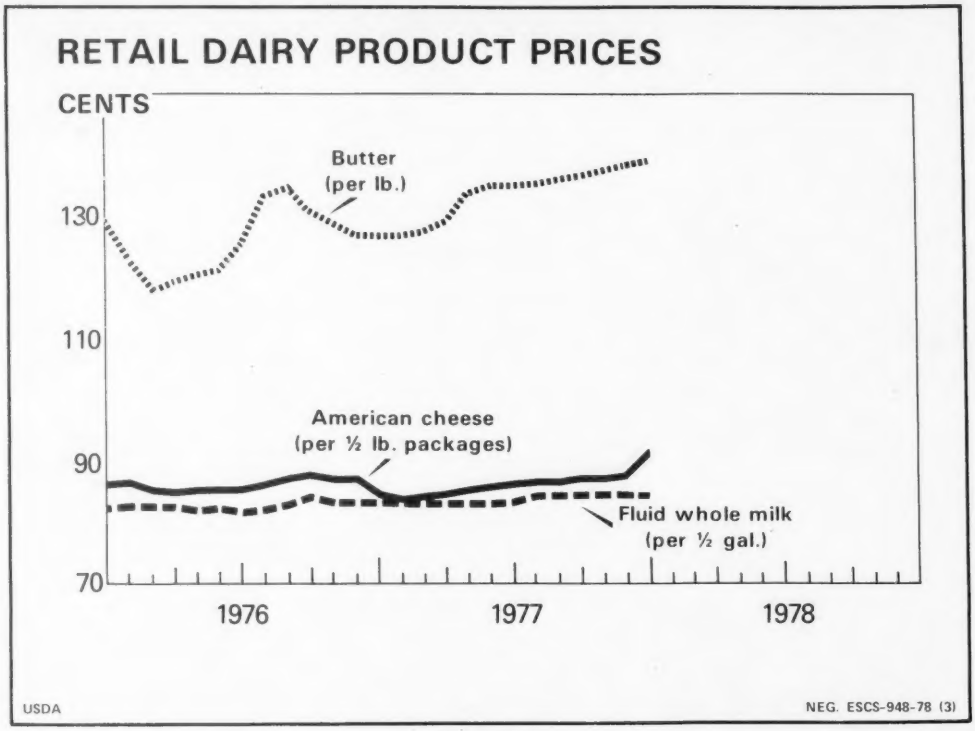

Figure 10

dairy index as fluid milk prices were only slightly above last year (figure 10).

Retail dairy prices probably will rise during the first half of 1978. These increases will reflect both the higher support price for milk and higher marketing costs. The monthly increases from a year ago may be slightly larger than January but the average increase for all of 1978 probably will be 4 to 6 percent.

The retail cost of dairy products in a market basket containing U.S. farm-produced foods rose less than 3 percent in 1977. Almost all of the increase was due to a 5-percent rise in the farm-retail price differential as the farm value was up less than 1 percent. However, the farm-retail spread was only 2 percent above a year earlier by the last quarter of 1977. The farmer's share of the retail food dollar dropped to a more typical 50 cents in 1977, down about a penny from 1976.

UTILIZATION

Manufactured Product Output Close to Last Year

In December-January, about the same amount of milk was used in manufactured products as a year earlier. Due to the lower fat test of farm milk, production of milkfat in those months was about the same as a year ago, although slightly more milk solids-not-fat were produced.

Butter output in January was up 3 percent from a year earlier while nonfat dry milk production was up 12 percent. Butter-powder production has eased somewhat from the sharp year-to-year

Wisconsin out-of-state milk shipments

Month	1977		1978	
	Loads	Volume	Loads	Volume
	Number	*Thousand pounds*	*Number*	*Thousand pounds*
January	206	9,682	206	9,682
February	163	7,661	314	7,661
March	59	2,773		
April	6	282		
May	1	47		
June	28	1,316		
July	85	3,995		
August	40	1,880		
September	491	23,077		
October	347	16,309		
November	396	18,612		
December	292	13,724		
Total	2,114	99,358		

Table 5–Production of selected manufactured dairy products, 1975-77

Item	1975	1976	1977[1]	Change from year earlier	
				1976	1977
	Million pounds			*Percent*	
Butter	983.8	978.6	1,093.6	-.5	+11.8
Cheese:					
American	1,654.6	2,062.4	2,035.7	+24.6	-1.3
Other	1,156.8	1,274.1	1,308.6	+10.1	+2.7
Creamed cottage	861.7	874.6	880.2	+1.5	+.6
Canned milk	926.9	895.5	807.3	-3.4	-9.8
Dry whole milk	63.1	78.1	69.1	+23.8	-11.5
Ice cream (mil. gal.)	836.6	817.9	807.9	-2.2	-1.2
Milk equivalent[2]	60,375	64,688	66,900	+7.1	+3.4
Nonfat dry milk	1,001.5	926.2	1,105.2	-7.5	+19.3

[1] Preliminary. [2] Total all manufactured products.

increases of last summer as increases in milk output have diminished. Preliminary estimates of February butter output indicate a small drop from last year.

In addition, there has been a shift toward cheese production. American cheese output in January was down only 2 percent from last year's heavy level and preliminary estimates indicate another small decline in February. These were the smallest declines since late last spring. The shift toward cheese output resulted from lower commercial stocks, stronger sales, and slightly higher prices. Production of other cheese types in January posted an increase of an eighth from a year ago.

Manufactured dairy products used almost 67 billion pounds of milk in 1977, up 3½ percent from 1976. The 12-percent rise in butter output absorbed not only the increase in milk supplies available for manufacturing but also the small drop in milk used in other products (table 5).

Cheese output used slightly less milk last year, as the increase in other-than-American cheese production did not offset the more than 1-percent dip in American cheese output. Among other products, slightly more milk was used in cottage cheese production, about the same amount was used for frozen desserts, and less was used for canned milk.

In coming months, the amount of milk used in manufacturing probably will be slightly above a year ago, with cheese absorbing most of the increase. Even though the year-to-year increases are expected to be small, manufactured product output will still be very heavy and capacity may well be strained in some areas.

1978 Cheese Sales To Resume Growth

After a relatively sluggish 2-percent rise in 1977, cheese sales this year probably will post a substantial gain. Growth in consumer purchasing power and higher retail meat prices probably will add to the longer run growth in cheese demand. However, the moderate increase in retail cheese prices probably will temper the sales increase somewhat.

Commercial use of butter in 1978 may be about the same to slightly lower. A wider difference in retail butter and margarine prices likely will hurt retail butter sales but improved incomes may bolster institutional and ingredient uses. Nonfat dry milk sales may also total close to the year-earlier level. Powder sales have been fairly stable since mid-1977 and the higher dry whey prices may have slowed the substitution of whey products for nonfat dry milk.

Fluid milk sales could be up slightly, with relatively stable retail prices aiding milk sales. Soft drink prices probably will trend higher, reflecting higher sugar prices, and this may also help fluid sales.

In total, commercial use of milk and dairy products in 1978 could rise about 1 percent from 1977's 116.2 billion pounds (milk equivalent). If this gain materializes, commercial disappearance of total milk would set a record.

Total dairy sales in 1977 were almost the same as the 1976 record (table 6). Commercial use was weak in early 1977, partially as a result of the harsh winter weather. Sales of most dairy products strengthened considerably during the second half of the year, as the increase from 1976 in retail prices of all food was larger than the modest rise in retail dairy prices.

Gains in commercial disappearance of butter during the second half of 1977 fell short of offsetting declines of almost a fifth during the first half (table 7). For the year, commercial butter use was down almost 6 percent from 1976. Nonfat dry milk use was down about 5 percent from 1976. Part of the apparent decline may have been due to users drawing down inventories, but substitute products probably continued to make inroads.

Table 6--Commercial disappearance: Total milk, annual and by quarters, 1975-77 1/

Item	1975	1976					1977 2/				
		By quarters				Annual	By quarters				Annual
		1st	2nd	3rd	4th		1st	2nd	3rd	4th	
	Billion pounds										
Production	115.3	29.2	32.4	30.2	28.5	120.3	29.8	33.1	30.9	29.0	123.0
Farm use	3.2	.8	.8	.8	.8	3.1	.7	.7	.7	.7	3.0
Marketings	112.1	28.4	31.6	29.4	27.7	117.2	29.1	32.4	30.2	28.3	120.0
Beginning commercial stocks	5.6	3.7	4.2	6.5	6.7	3.7	5.3	5.5	7.1	6.0	5.3
Imports	1.7	.4	.4	.4	.7	1.9	.5	.4	.4	.7	2.0
Total supply	119.4	32.5	36.2	36.3	35.1	122.8	34.9	38.3	37.7	35.0	127.3
Ending commercial stocks	3.7	4.2	6.5	6.7	5.3	5.3	5.5	7.1	6.0	5.0	5.0
Net removals	2.0	4/	.1	.1	1.1	1.2	2.1	2.6	1.1	.3	6.1
Commercial disappearance Actual	113.6	28.3	29.6	29.6	28.8	116.3	27.2	28.6	30.6	29.7	116.2
Percent change 3/	+.4	5/+3.4	+2.1	+1.0	+2.0	+2.4	5/-2.8	-3.3	+3.4	+3.4	-.1

1/ Milk equivalent, fat solids basis. Totals may not add due to rounding. 2/ Preliminary. 3/ From year earlier using unrounded data. 4/ Less than 50 million pounds. 5/ On a daily average basis.

Table 7 --Commercial disappearance: Selected dairy products, United States, annual 1968-76, by quarters, 1976-77

Year and quarter	Butter 1/	Cheese		Nonfat dry milk	Canned milk	Frozen products 3/
		American 2/	Other			
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. gal.
1968	976.0	1,213.3	803.0	1,058.0	1,496.8	1,032.3
1969	921.9	1,281.0	861.6	1,042.1	1,376.1	1,092.2
1970	898.2	1,398.0	909.1	983.2	1,213.8	1,097.3
1971	847.1	1,454.8	987.0	981.8	1,186.9	1,102.4
1972	885.4	1,595.7	1,127.8	919.2	1,102.6	1,108.6
1973	855.6	1,677.1	1,210.2	1,110.1	1,056.7	1,118.6
1974	929.9	1,730.6	1,276.5	809.9	999.5	1,128.0
1975	951.0	1,717.1	1,331.9	697.0	923.9	1,183.9
1976	919.0	1,934.5	1,460.7	719.2	862.4	1,152.7
1976-1st	246.8	463.5	337.2	182.0	222.9	253.4
2nd	213.9	493.1	359.7	188.5	204.8	326.2
3rd	211.5	479.9	367.3	200.7	206.2	340.5
4th	246.7	498.1	396.4	148.0	228.5	232.7
1977-1st	209.5	461.4	350.0	203.8	200.7	246.8
2nd	169.4	481.8	367.3	131.3	179.8	323.1
3rd	236.1	486.6	375.1	178.5	180.9	345.7
4th	250.6	521.5	413.1	167.4	226.4	237.6
	1976-77 percent change					
	Percent					
1st 4/	-14.2	+.7	+4.9	+13.7	-9.1	-1.6
2nd	-20.8	-2.3	+2.1	-30.3	-12.2	-1.0
3rd	+11.6	+1.4	+2.1	-11.1	-12.3	+1.5
4th	+1.6	+4.7	+4.2	+13.1	-9.2	+2.1

1/ Imports include butter equivalent of butteroil. 2/ Imports include Colby cheese; stocks do not include processed cheese. 3/ Excludes Mellorine. 4/ On a daily average basis.

Table 8--Factors influencing and indicative of the demand for milk and dairy products, United States, selected years, 1960-77

Year	Total population July 1 (including Armed Forces overseas)	Total civilian employment	Per capita disposable income		Civilian per capita disappearance				
			Actual	Deflated by consumer price index 1/	Milk equivalent		Milk solids		Margarine
					Fat-solids basis	Calcium content basis	Milk-fat	Solids-not-fat	
	Million	Million	Dollars	Dollars	Pounds	Pounds	Pounds	Pounds	Pounds
1960	180.7	65.8	1,934	2,180	653	512	24.5	41.4	9.4
1965	194.3	71.1	2,430	2,571	620	505	22.9	40.6	9.9
1966	196.6	72.9	2,597	2,672	604	503	22.3	40.3	10.5
1967	198.7	74.4	2,740	2,740	591	494	21.4	39.5	10.5
1968	200.7	75.9	2,930	2,812	577	499	21.2	39.7	10.8
1969	202.7	77.9	3,111	2,833	569	497	20.9	39.6	10.8
1970	204.9	78.6	3,348	2,879	561	486	20.6	39.8	11.0
1971	207.0	79.1	3,588	2,958	558	490	20.5	39.8	11.1
1972	208.8	81.7	3,837	3,062	561	479	20.6	39.6	11.3
1973	210.4	84.4	4,285	3,219	554	477	20.3	39.8	11.3
1974	211.9	85.9	4,646	3,146	543	471	20.0	38.2	11.3
1975	213.6	84.8	5,077	3,150	546	469	20.1	38.1	11.2
1976	215.1	87.5	5,511	3,232	548	488	20.1	39.0	12.2
1977 2/	216.8	90.6	6,035	3,325	552	484	20.2	38.7	11.6

	Average retail prices, BLS index, 1967=100								
	Consumer price	All foods	Dairy products	Fluid milk, grocery	Butter	Cheese, American process	Ice cream	Evaporated milk	Margarine, colored
1960	88.7	88.0	88.4	91.1	86.7	76.2	100.7	89.7	88.6
1965	94.5	94.4	90.0	90.3	89.4	85.5	95.4	89.7	97.2
1966	97.2	99.1	95.8	96.1	97.3	95.8	97.6	94.2	99.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.2	103.6	103.3	104.1	100.8	102.1	99.8	102.0	98.6
1969	109.8	108.9	106.7	107.0	102.1	107.7	100.5	105.2	98.3
1970	116.3	114.9	111.8	111.6	104.5	115.6	104.8	111.9	106.0
1971	121.3	118.4	115.3	114.6	105.8	121.0	106.2	118.6	116.0
1972	125.3	123.5	117.1	116.3	105.3	124.7	106.5	120.0	117.6
1973	133.1	141.4	127.9	127.3	110.7	138.5	113.1	134.3	133.4
1974	147.7	161.7	151.9	152.5	114.1	167.9	133.3	172.2	204.9
1975	161.2	175.4	156.6	152.7	124.2	175.8	151.6	183.9	224.6
1976	170.5	180.8	169.3	160.7	153.1	198.6	158.6	204.8	188.3
1977	181.5	192.2	173.9	162.3	161.8	204.6	167.2	217.4	205.6

1/ 1967 dollars.
2/ Preliminary.

Changes in dairy sales from year earlier

Item	1976	1977
	Percent	
Total milk[1]	+2.4	-.1
Manufactured products:		
American cheese	+12.7	+.9
Other cheese	+9.7	+3.1
Cottage cheese[2]	+1.9	+.8
Butter	-3.0	-5.8
Ice cream	-2.2	-1.2
Ice milk	-4.5	+3.7
Canned milk	-9.3	-8.7
Nonfat dry milk	+3.2	-5.3
Fluid products:	+.2	+.1
Whole milk	-2.8	-3.0
Skim and lowfat milk	+7.1	+6.9
Cream and mixtures	+2.5	-2.4

[1] On a milk equivalent, fat-solids basis. [2] Creamed and low-fat.

The 1977 increase in cheese sales was considerably less than the longrun trend, following a very large increase in 1976. Sales of American cheese were up about 1 percent while commercial use of other types was up 3 percent from 1976. Although consumer income was higher, lower retail meat prices were a drag on cheese sales (table 8).

Fluid milk sales were just barely above 1976, as increased use of lowfat and skim milks outweighed continued declines in whole milk sales. Although the rise in the index of nonalcoholic beverage prices dwarfed the rise in retail milk prices, most of the rise in this index was due to coffee—which does not compete heavily with milk.

Among other products, sales of cottage cheese were just slightly greater than the previous year, while canned milk use continued its downward trend. Ice cream sales were down slightly but ice milk sales gained 4 percent (table 9).

Donations Lift 1977 Per Capita Consumption; Per Person Sales Down

Per capita civilian consumption in 1977 was up almost 4 pounds to 552 pounds (milk equivalent, fat solids). Although per capita consumption from all sources rose just barely, per person consumption from commercial sources fell more than 1 percent from 1976.

With large Commodity Credit Corporation (CCC) supplies available, USDA donations (primarily through school feeding programs) rose substantially from the very small 1976 levels. This increase outweighed the decline in commercial use. Although higher than in recent years, these donations were still lower than in many earlier years when donation outlets were less limited.

Americans consumed an average of 20.2 pounds of milkfat last year, up just barely from 1976 (table 10). In contrast, per capita use of milk solids-not-fat slipped slightly as the small growth in per capita cheese sales was outweighed by declines in use of nonfat dry milk and fluid products.

Cheese consumption rose almost a half pound per person to 16.3 pounds in 1977. Most of the increase was due to larger donations as per capita commercial use was just slightly above a year earlier. In fact, about the same amount of American cheese was purchased per person as in 1976.

Per capita civilian consumption

Item	1975	1976	1977	1976-77 change
		Pounds		*Percent*
Products:				
Butter	4.8	4.4	4.4	+1
Cheese	14.5	15.9	16.3	+2
Cottage cheese	4.7	4.8	4.8	0
Ice cream	18.7	18.1	17.7	-2
Ice milk	7.7	7.4	7.6	+3
Nonfat dry milk	3.3	3.6	3.4	-6
Canned milk	5.3	5.1	4.8	-6
Fluid milk:				
Whole	186	179	172	-4
Lowfat and skim	78.4	83.4	88.4	+6
Cream and mixtures	5.6	5.7	5.5	-4
Milkfat	20.1	20.1	20.2	+1
Milk solids-not-fat	38.1	39.0	38.7	-1

Butter consumption held at 4.4 pounds per capita in 1977, as larger donations offset a drop of about a third of a pound per person in commercial use. However, nonfat dry milk consumption slipped.

Among other products, more lowfat fluid milk and ice milk was used but less whole milk, canned milk, and ice cream was consumed.

In 1978, per person consumption of milk in all products probably will be about the same or slightly higher. With large CCC supplies, donations will be similar to a year ago. The expected growth in total dairy sales would about keep pace with the increase in population.

Commercial Stocks Lower

Commercial stocks of dairy products were below a year ago on February 1. Holdings of milk solids-not-fat by commercial interests were down more than a fifth, due to lower American cheese and nonfat dry milk stocks. Commercial stocks of milkfat were down only 4 percent because of a large rise in butter stocks. On a milk equivalent basis, commercial dairy stocks totaled 5.1 billion pounds, down about 5 percent from a year earlier (table 11).

Industry holdings of American cheese have been sharply reduced from the high levels of late sum-

Table 9--Milk and dairy product sales (domestic disappearance, commercial sources) total and per capita, selected years, United States, 1970-77 1/

Year	Fluid milk product sales 10/					Butter	Cheese			Evaporated and condensed	
	Fluid whole milk	Cream 2/	Low-fat milk 3/	Total product weight	Whole milk equivalent 4/		Whole and part skim milk 5/		Cottage cheese 6/	Whole milk	Skimmed milk
							American	Other			
	Total										
	Million pounds										
1970	42,956	1,067	10,289	54,312	51,998	902	1,393	892	1,060	1,349	1,016
1971	42,108	1,076	11,485	54,669	51,853	878	1,452	971	1,108	1,303	1,039
1972	41,851	1,093	12,826	55,770	53,227	861	1,573	1,110	1,133	1,236	980
1973	40,443	1,130	14,062	55,635	52,413	846	1,661	1,193	1,103	1,194	894
1974	38,358	1,143	14,815	54,316	50,514	917	1,771	1,267	992	1,154	732
1975	38,254	1,175	16,577	56,006	50,800	948	1,692	1,317	1,006	1,097	761
1976 7/	37,185	1,204	17,755	56,144	51,200	932	1,930	1,443	1,026	1,067	783
1977 7/	36,075	1,175	18,975	56,225	50,200	869	1,932	1,487	1,033	1,017	800
	Per capita 8/										
	Pounds										
1970	214	5.3	51.3	271	259	4.4	6.8	4.4	5.2	6.6	5.0
1971	207	5.3	56.5	269	255	4.3	7.0	4.7	5.4	6.3	5.0
1972	204	5.3	62.5	272	259	4.1	7.6	5.3	5.4	5.9	4.7
1973	195	5.5	67.9	269	253	4.0	7.9	5.7	5.3	5.7	4.3
1974	184	5.5	70.9	260	242	4.3	8.4	6.0	4.7	5.5	3.5
1975	181	5.6	78.6	266	241	4.5	8.0	6.2	4.8	5.2	3.6
1976 7/	175	5.7	83.5	264	241	4.4	9.1	6.8	4.8	5.0	3.7
1977 7/	168	5.5	88.5	262	234	4.1	9.0	6.9	4.8	4.7	3.7

Year	Frozen products				Dry products				
	Ice cream	Ice milk	Sherbet	Other	Mellorine	Whole milk	Nonfat dry milk	Buttermilk	Whey 9/
	Total								
	Million pounds								
1970	3,656	1,577	318	40	249	43	960	51	294
1971	3,676	1,582	317	47	232	32	958	55	319
1972	3,685	1,599	325	53	218	24	853	48	377
1973	3,714	1,604	346	70	191	21	1,056	39	384
1974	3,753	1,629	325	56	166	15	839	44	453
1975	4,015	1,643	316	66	144	16	668	44	477
1976 7/	3,926	1,569	322	64	112	33	743	38	527
1977 7/	3,878	1,626	323	65	93	34	697	58	523
	Per capita 8/								
	Pounds								
1970	17.9	7.7	1.6	0.2	1.2	0.2	4.7	0.3	1.5
1971	17.8	7.7	1.5	.2	1.1	.2	4.6	.3	1.6
1972	17.7	7.7	1.6	.3	1.0	.1	4.1	.2	1.8
1973	17.7	7.6	1.6	.3	.9	.1	5.0	.2	1.8
1974	17.8	7.7	1.5	.3	.8	.1	4.0	.2	2.1
1975	19.0	7.8	1.5	.3	.7	.1	3.2	.2	2.3
1976 7/	18.5	7.4	1.5	.3	.5	.2	3.5	.2	2.5
1977 7/	18.1	7.6	1.5	.3	.4	.2	3.3	.3	2.4

1/ Excludes milk used on farms where produced and distribution from USDA supplies; includes sales to the Armed Services for use in the United States.
2/ Includes milk and cream mixtures.
3/ Includes skim milk, butter milk, and flavored milk drinks.
4/ Fat solids basis.
5/ Excludes cottage cheese.
6/ Includes full-skim American.
7/ Preliminary.
8/ Based on resident population, except fluid milk product sales--based on estimated population using fluid products from purchased sources.
9/ Includes modified whey products starting 1975.
10/ Different series than formerly published. For more information see pages 31-37, DS-345, May 1973.

Table 10--Milk solids and selected dairy products: Supply and utilization, 1970-77

Year and item	Supply				Utilization					Ending stocks
	Beginning stocks	Production	Imports	Total supply	Foreign		Domestic		Total use 2/	
					Exports	Shipments 1/	Military	Civilian		
	Million pounds									
Milkfat										
1970	188	4,284	72	4,544	15	20	87	4,149	4,333	211
1971	211	4,344	52	4,607	93	21	72	4,176	4,422	185
1972	185	4,410	66	4,661	57	25	64	4,255	4,461	200
1973	200	4,225	150	4,575	24	24	43	4,238	4,387	188
1974	188	4,238	108	4,534	21	20	39	4,189	4,326	208
1975	208	4,244	65	4,517	21	17	37	4,247	4,380	137
1976	137	4,402	74	4,613	19	20	34	4,279	4,410	203
1977 3/	203	4,513	75	4,791	18	21	34	4,344	4,474	317
Solids-not-fat										
1970	343	10,062	82	10,487	438	42	116	8,017	10,230	257
1971	257	10,197	57	10,511	411	36	105	8,127	10,311	200
1972	200	10,334	67	10,601	332	53	94	8,175	10,439	162
1973	162	9,939	335	10,433	77	46	80	8,287	10,236	197
1974	197	9,940	216	10,353	77	42	70	8,016	9,901	452
1975	452	9,930	67	10,449	170	33	65	8,051	9,870	579
1976	579	10,343	76	10,998	178	37	63	8,316	10,370	628
1977 3/	628	10,574	81	11,283	202	38	64	8,310	10,463	820
Butter 4/										
1970	89	1,143	2	1,234	2	7	45	1,061	1,115	119
1971	119	1,147	2	1,268	93	6	32	1,040	1,171	97
1972	97	1,102	2	1,201	44	10	23	1,017	1,094	107
1973	107	919	56	1,082	4	13	9	999	1,025	7/57
1974	7/57	962	2	1,021	1	6	9	956	972	49
1975	49	984	2	1,035	1	2	9	1,012	1,024	11
1976	11	979	2	992	1	3	7	934	945	47
1977 3/	47	1,094	2	1,143	2	2	7	947	958	185
American cheese										
1970	265	1,428	16	1,709	4	12	8	1,431	1,455	254
1971	254	1,518	17	1,789	4	16	7	1,520	1,547	242
1972	242	1,652	15	1,909	4	17	5	1,614	1,640	269
1973	269	1,678	28	1,975	4	16	4	1,661	1,685	290
1974	290	1,862	112	2,264	5	24	3	1,811	1,843	421
1975	421	1,660	16	2,097	5	19	3	1,762	1,789	308
1976	308	2,067	14	2,389	6	16	4	1,951	1,977	412
1977 3/	412	2,036	16	2,464	7	12	4	2,018	2,041	423
Other cheese										
1970	52	773	145	970	3	5	6	886	900	70
1971	70	856	119	1,045	3	6	5	966	980	65
1972	65	952	164	1,181	3	6	5	1,105	1,119	62
1973	62	1,007	202	1,271	3	7	5	1,188	1,203	68
1974	68	1,075	204	1,347	3	4	7	1,260	1,274	73
1975	73	1,151	163	1,387	4	5	7	1,310	1,326	61
1976	61	1,269	193	1,523	3	10	3	1,440	1,456	67
1977 3/	67	1,309	194	1,570	3	16	3	1,484	1,506	64
Evaporated and condensed milk 5/										
1970	150	1,514	3	1,667	50	63	6	1,432	1,551	116
1971	116	1,492	3	1,611	68	56	5	1,393	1,522	89
1972	89	1,435	2	1,526	55	72	5	1,313	1,445	81
1973	81	1,338	3	1,422	43	58	4	1,248	1,353	69
1974	69	1,285	3	1,357	43	58	2	1,175	1,278	79
1975	79	1,218	1	1,298	54	64	2	1,119	1,239	59
1976	59	1,224	1	1,284	49	76	0	1,088	1,213	71
1977 3/	71	8/1,132	1	8/1,204	34	62	2	8/1,031	8/1,129	75
Nonfat dry milk 6/										
1970	222	1,444	2	1,668	416	16	7	1,079	1,530	138
1971	138	1,418	2	1,558	358	17	5	1,083	1,468	90
1972	90	1,223	2	1,315	282	23	5	955	1,270	45
1973	45	917	267	1,229	18	19	1	1,113	1,154	75
1974	75	1,020	115	1,210	9	18	1	884	916	294
1975	294	1,001	2	1,297	113	6	1	703	828	469
1976	469	926	2	1,397	126	8	0	764	911	486
1977 3/	486	1,105	2	1,593	156	8	0	727	915	678

1/ To U.S. territories.
2/ Includes fed to animals or wasted where applicable.
3/ Preliminary.
4/ Includes butter equivalent of butteroil.
5/ Unskimmed includes both bulk and case goods.
6/ Human food only.
7/ Includes an estimated 10 million pounds of imported butter.
8/ Estimated.

Table 11--Stocks of dairy products, United States, end of year or month, 1965-77

Year and month	Commercial stocks					Government stocks				Total milk equivalent 3/
	Butter	American cheese	Other cheese	Canned milk	Nonfat dry milk	Butter 1/	American cheese 2/	Nonfat dry milk	Evaporated milk	
	------ Million pounds ------									
1965	27.1	270.2	37.6	140.7	58.2	25.0	0.3	96.2	---	4,458
1966	30.2	322.1	50.4	204.5	118.2	2.1	.2	---	---	4,858
1967	18.4	302.3	46.2	196.0	98.7	150.2	80.8	157.6	---	8,252
1968	14.5	291.1	62.3	101.3	79.0	102.9	51.6	198.7	5.6	6,634
1969	25.1	264.4	52.1	106.9	83.9	63.6	1.1	137.8	42.9	5,245
1970	19.7	252.7	70.5	115.7	95.3	99.1	1.3	42.6	.1	5,803
1971	26.2	235.6	65.4	88.6	77.0	70.7	6.1	12.5	.2	5,104
1972	11.1	269.3	62.0	74.7	37.9	96.4	.2	6.9	5.8	5,498
1973	33.5	289.9	67.5	69.2	74.5	22.8	.4	.1	4/	5,207
1974	34.7	419.8	73.1	79.2	134.6	14.5	1.1	158.6	4/	5,886
1975	5.8	305.7	60.8	58.6	47.1	5.0	2.0	421.8	4/	3,844
1976										
Mar.	28.1	308.7	58.5	57.4	54.9	3.0	.8	420.1	4/	4,274
June	76.3	418.3	64.9	125.4	127.9	4.6	.5	359.4	.1	6,596
Sept.	65.5	455.7	66.3	135.2	107.9	2.5	.7	390.5	.2	6,735
Dec.	28.0	409.8	67.1	70.6	98.8	19.1	1.6	386.6	.1	5,708
1977 5/										
Mar.	44.9	401.6	64.5	63.0	78.1	61.6	20.9	386.5	4/	7,005
June	70.2	482.1	73.3	127.7	128.7	126.5	32.1	452.1	4/	9,987
Sept.	42.2	436.6	70.8	148.6	81.7	161.2	62.4	597.3	4/	9,974
Dec.	35.3	361.5	64.0	75.2	60.7	149.6	60.5	617.2	4/	8,626

1/ Includes butter equivalent of butteroil and ghee, 1965. 2/ Includes process cheese held by USDA beginning May 1967. 3/ Includes manufactured products for which current monthly series are available (excludes nonfat dry milk). Excludes cream and bulk condensed milk beginning 1968. 4/ Less than 50,000 pounds. 5/ Preliminary.

mer. These stocks on February 1 were down almost a fifth from a year earlier and were somewhat small relative to the current and anticipated level of sales. However, these stocks probably were reduced in anticipation of a heavy surplus this spring. Stocks of other cheese varieties were also smaller on February 1.

Commercial stocks of butter rose sharply in January. On February 1, they were up 80 percent from a year ago and more than a half from January 1. This jump probably was a temporary phenomenon (possibly weather-related) and was partially responsible for the pickup in USDA purchases in early February. Manufacturers' stocks of nonfat dry milk on February 1 were ample in light of current sales.

Because of the lower cheese stocks, the industry is in a much better position to handle a heavy spring surplus than it was a year ago. Substantial amounts of milk will be required to seasonally rebuild commercial cheese stocks. The large butter stocks were not particularly troublesome to the industry, since surplus butter and nonfat dry milk can be cleared to CCC relatively easily.

USDA Purchases Pick Up

After totaling only a fourth as large as a year earlier in October-December, USDA removals under the price support program picked up in January-February. Net removals during the first 2 months of 1978 were equivalent to about 1.1 billion pounds of milk, about two-thirds as much as a year ago. Butter purchases were down almost a fifth from a year earlier; very little cheese has been bought thus far in 1978.

Net removals of nonfat dry milk in January-February ran somewhat above year-earlier levels. Purchases of nonfat dry milk have been significant every month since January 1976.

Purchases under the price support program probably will be heavy through this summer. Even the combination of stronger-than-expected sales and weaker-than-expected production probably could not reduce the surplus to the levels of 1973-76. For all of 1978, CCC net removals might be as large as last year.

During 1977, 222 million pounds of butter, 148 million pounds of American cheese, and 16 million pounds of canned milk (totaling almost 6.1 billion pounds milk equivalent) were removed from the commercial market by USDA programs (table 12). These purchases were the largest since 1971 and easily exceeded the combined total of the previous 3 years. However, the 1977 purchases were far from a record; about two-thirds of the years since the inception of the current program have had lower totals.

Net removals of nonfat dry milk in 1977 totaled 464 million pounds, the largest since 1968. Even so, this was only about a third of the purchases during the peak years of the early 1960's.

Proportionally, only slightly more nonfat dry milk than butter was purchased in 1977. However, this was in sharp contrast to the 3 prior years, when powder purchases far outweighed butter purchases. Removals of American cheese accounted for only about a fourth of the milk equivalent total last year. Even so, this proportion was higher than in most earlier years of heavy surplus. In total, slightly more than 5 percent of the 1977 marketings of milkfat and slightly less than 5 percent of the marketings of solids-not-fat were purchased.

CCC uncomitted inventories of all 3 products on March 1 were well above a year earlier. These holdings of nonfat dry milk were record-high. Uncommitted inventories of cheese were the largest on that date in a decade while butter inventories were the largest in 15 years. With large purchases expected and limited donation outlets available, such holdings probably will grow considerably through late summer.

Uncommitted CCC stocks

Item	March 1	
	1977	1978
	Million pounds	
Butter (bulk)	81.4	201.6
American cheese	18.0	36.6
Nonfat dry milk	428.5	649.2

Federal Order Summary—1977[1]

Almost 123,000 producers delivered nearly 78 billion pounds of milk to handlers regulated under the 47 Federal milk orders during 1977, approximately 66 percent of the total milk marketed in the United States. Producer deliveries at Federal order plants during the year were 4½ percent above the previous year. More than one-half of the increase was accounted for by the Upper Midwest and Iowa order markets. The Upper Midwest order—a merger of 4 Minnesota orders in June 1976—and the Iowa order—a merger of 4 Iowa orders in May 1977—include more liberal pooling provisions than those which had been provided for in the individual orders. Average daily deliveries per producer in all markets increased by 4.8 percent and averaged 1,740 pounds during 1977.

[1]Prepared by Joel L. Blum, Dairy Division, AMS, USDA.

Table 12--Dairy products removed from the commercial market by programs of the United States Department of Agriculture, 1949-77

Year and month	Removals 1/					Solids content of removals			
	Butter 2/	American cheese 3/	Evaporated milk 4/	Nonfat dry milk 5/	Milk equivalent	Milkfat	Solids-not-fat	As a percentage of marketings: Milkfat	As a percentage of marketings: Solids-not-fat
	Million pounds							Percent	
1949	111.7	25.5	---	325.5	2,489	100.4	321.1	2.6	4.6
1950	14.6	83.2	---	327.2	1,126	40.9	339.9	1.1	4.9
1951	6/-27.3	6/-7.1	---	35.3	6/-618	6/-24.0	31.5	6/	.5
1952	16.1	1.7	---	42.3	339	13.8	41.2	.4	.6
1953	355.2	302.5	---	597.1	10,200	387.5	668.9	9.7	8.6
1954	305.1	242.5	---	644.4	8,588	328.2	695.5	8.0	8.7
1955	162.0	141.3	---	534.7	4,685	179.6	558.0	4.3	6.8
1956	164.6	186.5	---	723.4	5,206	197.6	753.0	4.7	8.7
1957	172.5	240.6	---	825.2	5,870	222.1	867.5	5.2	9.8
1958	183.7	7[illegible].0	---	886.0	4,658	178.2	875.0	4.2	9.8
1959	123.7	[illegible]7.2	---	830.3	3,214	123.8	815.6	2.9	9.1
1960	144.8	.3	---	852.8	3,101	122.6	819.8	2.9	8.9
1961	329.4	100.0	---	1,085.6	8,019	305.0	1,075.3	6.9	11.2
1962	402.7	212.9	---	1,386.1	10,724	402.4	1,399.0	9.1	14.3
1963	307.5	110.9	---	1,219.2	7,745	291.8	1,210.1	6.7	12.4
1964	295.7	128.5	---	1,168.8	7,676	287.6	1,166.9	6.5	11.6
1965	241.0	48.6	---	1,098.4	5,665	217.4	1,074.0	5.0	10.8
1966	25.1	10.8	---	365.8	645	26.2	355.5	.6	3.7
1967	265.1	180.5	---	687.0	7,427	276.3	719.1	6.6	7.5
1968	194.8	87.5	54.9	557.8	5,159	193.2	575.4	4.7	6.0
1969	187.9	27.7	107.5	407.2	4,479	171.6	421.5	4.2	4.4
1970	246.4	48.9	48.4	451.6	5,774	221.1	460.7	5.3	4.8
1971	292.2	90.7	111.4	456.2	8/7,268	8/276.5	8/490.1	6.6	5.0
1972	233.7	30.4	97.0	345.0	8/5,345	8/208.4	8/362.0	4.9	3.6
1973	97.7	3.2	53.7	36.8	8/2,185	8/ 84.9	8/ 49.0	2.1	.5
1974	32.7	60.3	28.3	265.0	8/1,346	8/ 50.4	8/280.2	1.2	2.9
1975	63.4	68.2	24.5	394.5	2,036	77.7	405.6	1.9	4.2
1976	39.4	38.0	21.8	157.1	1,236	46.8	167.2	1.1	1.7
1977 7/									
Jan.	32.4	17.8	.3	24.8	846	32.0	29.7		
Feb.	31.5	23.3	.8	21.3	883	33.1	28.1		
Mar.	11.6	17.8	.7	2.4	417	15.1	8.0		
Apr.	25.9	6.6	1.0	37.3	602	23.3	38.4		
May	43.7	14.0	1.6	62.8	1,043	40.3	65.4		
June	35.1	23.1	.6	78.2	954	36.3	82.8		
July	16.0	16.8	2.2	67.8	501	18.9	71.0		
Aug.	13.5	24.0	2.7	62.7	521	19.2	68.3		
Sept.	.3	2.9	1.6	38.3	39	1.6	38.0		
Oct.	7.0	1.4	1.9	26.4	162	6.4	26.2		
Nov.	5.4	.4	1.2	22.0	119	4.7	21.6		
Dec.	.1	.1	1.3	20.3	6	.4	19.8		
Total*	222.4	148.3	15.9	464.3	6,092	231.3	497.4	5.3	4.8

1/ Delivery basis, after unrestricted domestic sales.
2/ Includes butter equivalent of anhydrous milkfat, PIK, and purchases under Sec. 709, and 4a.
3/ Includes purchases under Sec. 709, and 4a.
4/ Includes purchases under 4a.
5/ Includes PIK certificates issues, and purchases under Sec. 709 and 4a.
6/ Domestic sales exceeded purchases.
7/ Preliminary.
8/ Includes dry whole milk purchases beginning November, 1971
*May not add due to rounding.

In 42 comparable Federal order markets, producer deliveries were up 2.0 percent from a year earlier. Although the average number of producers delivering to these markets declined, the decline was more than offset by an increase in average daily deliveries per producer. Producer milk used in Class I in the 42 comparable markets declined about one-half percent. With deliveries up and Class I use down in these markets, the Class I utilization percentage declined from 56 to 55 percent.

Minimum Class I prices in Federal order markets averaged $10.59 per 100 pounds during 1977, 11 cents below 1976. Producer blend prices during 1977 averaged $9.69, down 6 cents per 100 pounds, reflecting the lower minimum Class I price and the lower Class I utilization.

Sales of lowfat and skim milk items increased again in 1977 as the longtime trends towards products containing lower butterfat continued. Whole milk sales in 1977 were below year-ago levels for the twelfth consecutive year. During 1977, lowfat and skim milk items accounted for almost 37 percent of the total sales of fluid milk in comparable Federal marketing areas.

The trend toward fewer and larger markets continued in 1977 with the merger of four orders into one and the expansion of another order into previously unregulated areas. In May, the Cedar Rapids-Iowa City, Des Moines, North Central Iowa, and Quad Cities-Dubuque Federal order areas plus 19 counties previously unregulated were combined to form a single Iowa area. In November, the Indiana Federal order area was expanded to encompass 4 counties in Michigan which previously were unregulated. There are now 47 Federal milk marketing areas encompassing an estimated 157.5 million people.

Dairy product imports[1]
(Quota and non-quota)

Year	Yearly quota[2]	Imports subject to quota	Imports not subject to quota	Total
	Million pounds			
1970	946	845	1,033	1,878
1971	973	776	580	1,356
1972	1,166	1,023	671	1,694
1973	3,608	3,263	596	3,859
1974	2,293	1,968	955	2,923
1975	1,306	976	693	1,669
1976	1,306	1,037	906	1,943
1977	1,306	1,113	848	1,961

[1] Milk equivalent. [2] Includes temporary quotas authorized in 1973 and 1974.

FOREIGN DAIRY TRADE AND TRENDS

1977 Imports About the Same

In 1977, U.S. dairy imports were about the same as 1976's 1.9 billion pounds milk equivalent as the import quota system held imports to only about 1½ percent of domestic consumption. Imports under quota were equivalent to 1.1 billion pounds of milk last year, up about 7 percent from 1976 (table 13). Even so, only about 85 percent of the amount allowed under quotas actually entered the United States. Nonquota types of cheese added an additional 0.8 billion pounds milk equivalent, down from 0.9 billion pounds in 1976.

While nonquota types of cheese were down slightly, total cheese imports were somewhat higher. Thus, the increase in the "pricebreak" level last spring evidently was enough to bring substantial quantities of cheese under quota. About 106 million pounds of cheese subject to quota were imported, up 9 percent from 1976. Nonquota cheese imports totaled 103 million pounds last year, down about 7 million pounds from the previous year.

Quotas for most high-fat products (butter, butteroil, butterfat mixtures, ice cream, and frozen cream) generally came close to being filled. With the exception of nonfat dry milk, the quotas for high solids-not-fat products and concentrated milk products were not completely filled.

Casein imports in 1977 were up almost a third from the previous year, while lactose imports were three times the 1976 low level.

U.S. exports continued to decline in 1977 as the overseas market for our relatively high-priced dairy products continued weak. The equivalent of 0.5 billion pounds of milk (fat solids basis) was exported last year. More butter and cheese but less canned milk and dry whole milk were exported. Nonfat dry milk exports—mostly donations under the Food for Peace program (P.L. 480)—were up about a fourth.

U.S. dairy trade
(milk equivalent)

Year and quarters	Imports		Exports	Shipments[1]
	Cheese	Other		
	Million pounds			
1976				
1st	310	114	132	140
2nd	302	71	145	129
3rd	389	30	124	136
4th	682	44	101	114
Year[2]	1,683	259	502	520
1977				
1st	343	140	107	123
2nd	315	52	116	170
3rd	418	14	138	142
4th	624	54	99	92
Year[2]	1,701	260	459	527

[1] To U.S. territories. [2] May not add due to rounding.

Table 13--Dairy Products: U.S. imports, quota and non-quota, total 1976, and January-December, 1976-77 1/

Product	Calendar year quota	1976 imports	December			Cumulative, January-December		
			1976	1977	1977 as a % of 1976	1976	1977	1977 as a % of 1976
	Thou. lb.	Thou. lb.	Thou. lb.	Thou. lb.	Pct.	Thou. lb.	Thou. lb.	Pct.
Cheese, quota types								
American-Cheddar	10,037.5	7,984	5,000	2,607	52	7,984	9,337	117
-Other	6,096.6	6,241	3,759	1,637	44	6,241	6,407	103
Italian-Original loaves	11,500.1	11,068	689	1,891	274	11,068	9,803	89
-Other	1,494.0	1,442	16	115	719	1,442	1,343	93
Edam and Gouda-Natural	9,200.4	8,524	1,446	2,098	145	8,524	8,251	97
-Processed	3,151.0	499	130	449	345	499	1,064	213
Blue Mold	5,017.0	4,593	1,026	596	58	4,593	3,354	73
Swiss-Emmenthaler, -$1.05*	20,420.0	12,435	686	1,500	219	12,435	14,133	114
-Gruyere-process, -$1.05*	11,242.0	8,690	2,430	2,401	99	8,690	9,399	108
Other-Over 0.5% fat, -$1.05*	40,730.0	31,116	14,785	17,105	116	31,116	38,308	123
-Under 0.5% fat	8,901.0	4,741	1,039	758	73	4,741	4,981	105
Total	127,789.6	97,332	31,006	31,157	100	97,332	106,381	109
Cheese, non-quota types								
Swiss-Emmenthaler, $1.05+*		48,499	5,097	5,592	114	48,499	45,494	94
-Gruyere-process, $1.05+*		6,741	293	402	137	6,741	5,881	87
Other, $1.05+*		34,405	4,025	4,060	101	34,405	31,940	93
Pecorino		16,728	1,965	1,809	92	16,728	15,825	95
Roquefort		1,560	98	168	171	1,560	1,620	104
Other 2/		2,012	124	82	66	2,012	2,259	112
Total		109,945	11,603	12,313	106	109,945	103,018	94
Other quota products								
Butter	707.0	528	23	38	165	562	743	132
Butteroil	1,200.0	1,200	---	---	---	1,200	1,200	100
Butterfat mixtures	2,580.0	2,468	190	---	---	2,468	2,393	97
Ice cream	3,377.3	373	373	---	---	373	3,187	854
Frozen cream	12,540.0	12,964	861	2,898	337	12,964	12,529	97
Nonfat dry milk	1,807.0	1,807	298	40	13	1,807	1,825	101
Dried buttermilk	496.0	444	77	---	---	444	179	40
Evaporated milk	1,312.0	28	---	---	---	28	44	157
Condensed milk	4,079.0	639	---	162	---	639	767	120
Chocolate crumb-Regular	17,000.0	9,246	461	519	113	9,246	4,901	53
-Lowfat	4,680.0	2,604	944	---	---	2,604	1,386	53
Animal feed with milk solids	16,300.0	12,226	1,515	1,650	109	12,226	12,815	105
Non-quota products								
Casein		112,141	14,636	13,341	91	112,141	144,245	129
Lactose		1,268	262	322	123	1,268	3,991	315
Milk equivalent, fat solids basis total all products	1,305,620	1,942,714	370,264	389,936	105	1,943,314	1,961,204	101

1/ Preliminary. 2/ Gjetost, Bryndza, Gammelost and Noekkelost, and Goya.
*Price break effective May 5, 1977.

Shipments to U.S. territories also totaled about 0.5 billion pounds milk equivaient, up slightly from 1976. This increase was almost all due to higher shipments of other-than-American cheese types and dry whole milk, which more than offset a substantial decline in canned milk shipments and slight declines in shipments of most of the other products.

Foreign Powder Stocks Lower

Dairy intervention stocks of nonfat dry milk in the European Community (EC) at the end of 1977 were significantly lower than the year before, although the nearly 1 million metric tons were still very large. Canadian stocks of nonfat dry milk were also well below a year ago at the start of 1978.

Milk deliveries in the EC in 1977 were up about 3 percent on the strength of strong summer gains from the 1976 drought-reduced levels. Most other West European countries produced about the same amount of milk as in 1976. Canadian milk production was higher due to strong gains in the second half. Due to current dry weather in New Zealand and drought and policy decisions in Australia, milk production there during the current production year is likely to be lower than year-earlier levels and could run considerably lower.

Most of the increase in 1977 EC milk output went toward meeting the stronger cheese demand. Butter-powder production was about the same as in 1976 while cheese output was up 6 percent. There was also a shift towards cheese in many other West European countries. In contrast, New Zealand has placed more emphasis on butter.

Table 14.--U.S. Dairy Situation at a Glance

Item	Unit or base period	1976	1977							1978
		Jan.	Jan.	Feb.	Sept.	Oct.	Nov.	Dec.	Year	Jan.
Production and cow numbers:										
Total milk	Mil. lb.	9,600	9,914	9,337	9,850	9,844	9,429	9,770	122,957	9,988
Milk per cow	Lb.	866	898	847	898	899	861	893	11,194	914
Number of milk cows	Thou.	11,087	11,036	11,025	10,972	10,955	10,952	10,939	10,984	10,931
Prices received by farmers:										
All milk, sold to plants, 100 pounds	Dol.	10.10	9.65	9.54	10.00	10.20	10.20	10.30	9.72	10.20
Percentage of parity 1/	Pct.	82	74	72	77	77	75	75	75	73
Manufacturing grade milk, 100 pounds	Dol.	9.04	8.48	8.41	8.83	8.99	9.10	9.16	8.70	9.12
Parity equivalent	Dol.	10.00	10.67	10.84	10.93	10.93	10.93	11.01	10.93	11.47
Fat content	Pct.	3.77	3.79	3.74	3.64	3.77	3.80	3.82	3.67	3.78
Minnesota-Wisconsin (3.5% fat), 100 pounds	Dol.	8.90	8.19	8.16	8.74	8.74	8.79	8.87	8.58	8.91
Milk eligible for fluid market, 100 pounds	Dol.	10.40	9.93	9.82	10.30	10.40	10.50	10.50	9.96	10.50
Price ratios and dairy ration values:										
Milk-feed	Lb.	1.65	1.52	1.48	1.80	1.84	1.75	1.71	1.60	1.69
Manufacturing grade milk-hog	Lb.	.19	.22	.21	.22	.23	.24	.22	.22	.21
Manufacturing grade milk-beef cattle	Lb.	.28	.26	.25	.25	.25	.26	.26	.25	.25
Value of concentrate ration fed milk cows	Dol.	6.11	6.34	6.44	5.55	5.54	5.83	6.02	6.10	6.05
Farm cash receipts from dairy products	Mil. dol.	962	943	879	972	979	959	1,007	11,782	1,017
Production of factory products:										
Creamery butter	Mil. lb.	92.5	105.6	96.2	75.5	84.9	81.8	89.3	1,093.6	108.3
American cheese, whole milk	Mil. lb.	148.3	166.8	158.8	142.8	145.2	136.0	157.8	2,035.7	163.6
Cheese, other than American	Mil. lb.	98.2	98.0	95.2	108.6	109.1	112.5	117.7	1,308.6	110.5
Canned milk, unskimmed	Mil. lb.	74.3	62.5	63.3	59.6	53.3	46.1	57.6	807.3	56.2
Dry whole milk	Mil. lb.	7.4	6.1	6.4	4.2	4.2	5.5	4.7	69.1	6.8
Frozen products 2/	Mil. gal.	72.9	69.9	75.7	105.0	85.4	78.9	73.4	1,153.3	69.5
Creamed cottage cheese	Mil. lb.	69.3	69.9	69.5	72.2	69.5	69.4	63.5	880.2	68.8
Total whole milk equivalent 3/	Mil. lb.	4,936	5,259	5,100	4,985	4,861	4,631	4,948	65,853	5,398
Nonfat dry milk, human use	Mil. lb.	61.1	71.5	72.3	78.4	71.5	65.9	77.5	1,105.2	79.7
Wholesale prices:										
Butter, 92-score, Chicago, pound	Ct.	86.1	90.8	90.8	100.7	100.7	100.9	101.5	98.4	100.7
Cheese, American (40-pound blocks), f.o.b. Wisconsin assembling points, pound	Ct.	100.4	92.6	92.6	98.3	98.3	98.8	100.1	96.8	100.1
Evaporated milk, case (mid-point of range)	Dol.	13.39	13.54	13.34	14.16	14.07	14.22	14.17	14.01	14.12
Dry whole milk, pound	Ct.	83.1	76.8	78.1	82.7	82.3	83.8	83.7	80.8	84.3
Nonfat dry milk, pound	Ct.	65.8	62.9	62.5	67.9	67.9	68.0	68.1	66.5	68.1
Dairy products and ice cream index (BLS)	1967=100	169.7	166.8	166.9	175.7	175.9	176.9	178.2	173.4	178.0
Retail prices (BLS):										
Milk, fresh, grocery, half-gallon	Ct.	82.2	83.5	83.6	84.1	84.5	84.6	84.6	83.9	84.5
Evaporated milk, 14½-ounce can	Ct.	33.5	35.1	35.1	37.2	37.2	37.2	37.4	36.3	37.5
Cheese, American, processed, sliced, ½-pound package	Ct.	85.9	84.8	84.0	86.6	87.2	87.5	88.0	86.0	91.6
Butter, pound	Ct.	129.7	126.8	126.8	136.1	136.5	137.4	138.1	133.1	138.9
Ice cream, half-gallon	Ct.	124.8	131.7	130.7	137.5	138.6	137.9	139.6	135.2	139.6
Dairy products index	1967=100	168.2	171.3	171.1	175.4	176.2	176.5	176.9	173.9	177.5
All foods index	1967=100	180.8	183.4	187.7	194.5	194.4	195.6	196.3	192.2	198.2
Margarine, colored, pound	Ct.	56.6	53.0	52.9	61.0	59.6	59.6	58.8	57.2	58.6
Stocks, end of month:										
Creamery butter	Mil. lb.	9.3	67.6	94.3	203.4	198.3	193.7	184.9	---	195.9
Cheese, total 4/	Mil. lb.	362.5	485.8	470.6	569.8	519.3	497.5	486.0	---	459.2
Canned milk, unskimmed	Mil. lb.	44.6	66.3	63.5	148.6	134.3	101.0	75.2	---	59.8
Dry whole milk	Mil. lb.	6.7	10.4	8.9	6.3	5.8	5.9	6.0	---	6.0
Total whole milk equivalent 5/	Mil. lb.	3,735	6,201	6,589	9,974	9,353	8,983	8,626	---	8,554
Nonfat dry milk	Mil. lb.	459.5	465.4	469.3	679.0	688.3	681.7	677.9	---	689.4
Commercial disappearance:										
Creamery butter	Mil. lb.	94.5	72.0	53.8	88.7	81.9	74.4	94.3	866.1	N.A.
Cheese, American	Mil. lb.	152.5	149.8	154.0	179.3	195.1	153.8	172.6	1,951.4	N.A.
Cheese, other than American	Mil. lb.	110.9	112.0	106.7	127.0	129.2	129.6	154.3	1,505.4	N.A.
Canned milk, unskimmed	Mil. lb.	86.1	66.8	65.3	68.1	65.9	78.2	82.3	787.6	N.A.
Milk in all products	Mil. lb.	9,565	8,986	8,299	10,412	10,224	9,412	10,160	116,237	N.A.
Nonfat dry milk	Mil. lb.	52.7	54.0	58.1	68.0	58.9	44.6	63.9	680.8	N.A.
USDA net removals:										
Butter	Mil. lb.	---	32.4	31.5	.3	7.0	5.4	.1	222.4	26.0
Cheddar cheese	Mil. lb.	---	17.8	23.3	2.9	1.4	.4	.1	148.3	1.4
Nonfat dry milk	Mil. lb.	6.7	24.8	21.3	38.3	26.4	22.0	20.3	464.3	29.1
Evaporated milk	Mil. lb.	2.3	.3	.8	1.6	1.9	1.2	1.3	15.9	1.6
Total whole milk equivalent	Mil. lb.	5	846	883	39	162	119	6	6,092	554
Fluid sales, change from year earlier: 6/										
Whole milk	Pct.	-2.1	-2.8	-3.8	-2.4	-3.8	-3.9	-3.6	-3.0	N.A.
Low-fat and skim milk	Pct.	+6.8	+7.7	+5.7	+7.7	+6.2	+6.5	+4.2	+6.9	N.A.
Total fluid milk	Pct.	+.8	+.7	-.5	+1.2	-.2	-.4	-.7	+.1	N.A.
Cream and cream mixtures	Pct.	+4.4	-9.3	-3.4	-3.6	-5.2	-1.0	+.2	-2.4	N.A.

1/ Seasonally adjusted price as percentage of parity price.
2/ Ice cream, ice milk, and sherbet.
3/ Includes manufactured products for which current monthly series are available.
4/ Natural, plus process American cheese held by CCC.
5/ Excludes cream and bulk condensed milk.
6/ Daily average sales in Federal and State Marketing areas.
NA = Not Available

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